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THE MISSISSIPPI DOCTOR

VOL. 10. BOONEVILLE, MISSISSIPPI, FEBRUARY, 1933 NO. 9

DR. PERCY W. TOOMBS

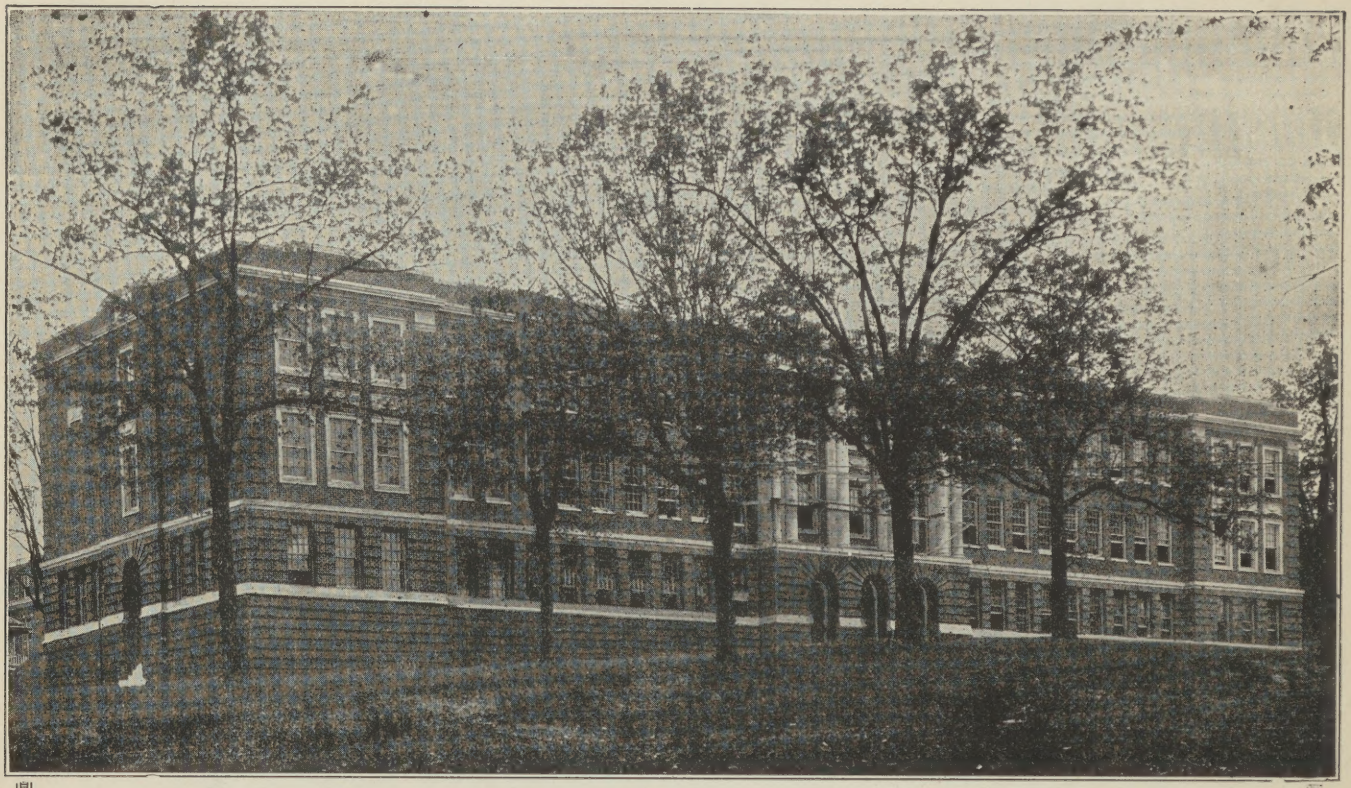
To the cherished memory of Dr. Percy W. Toombs we dedicate this issue of The Mississippi Doctor—

A native Mississippian who won the proud admiration of our entire medical profession,

Immaculate in appearance, thorough and advanced in the art of his specialty, versatile and cultured, and possessing a professional mind, a medical soul and a missionary heart,

A pioneer, a tireless worker, and one of the best loved obstetricians of our nation,

"And when he fell in whirlwind, he went down
As when a lordly cedar, green with boughs,
Goes down with a great shout upon the hills,
And leaves a lonesome place against the sky."



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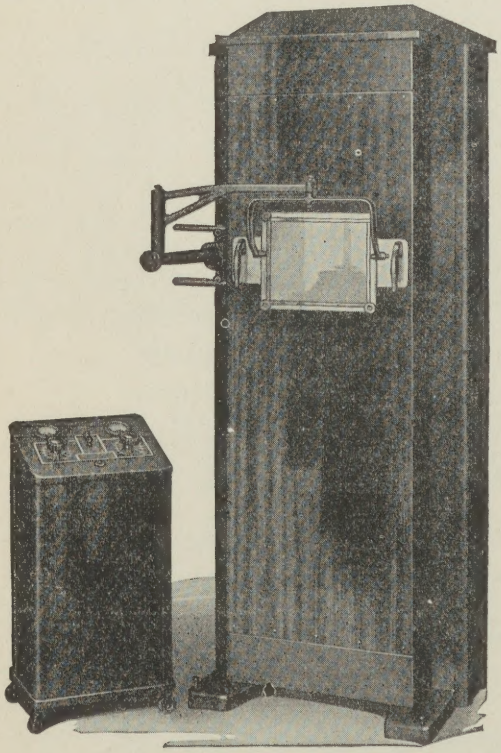

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OFFICIAL ORGAN OF THE NORTHEAST MISSISSIPPI 13-COUNTY MEDICAL SOCIETY

—AND—

NORTH MISSISSIPPI 6-COUNTY MEDICAL SOCIETY

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It is now said that rheumatism is twenty times as prevalent among the poor. Don't you feel your "jints" aching?

On March 21st our society will meet at Macon. Macon is in the lower part of the district. It is a nice town. It is a nice town in which to meet. Let us all go down and get a fraternal handshake and listen to a good program. It will be near enough for Meridian to come up and "partake" of some of our schooling.

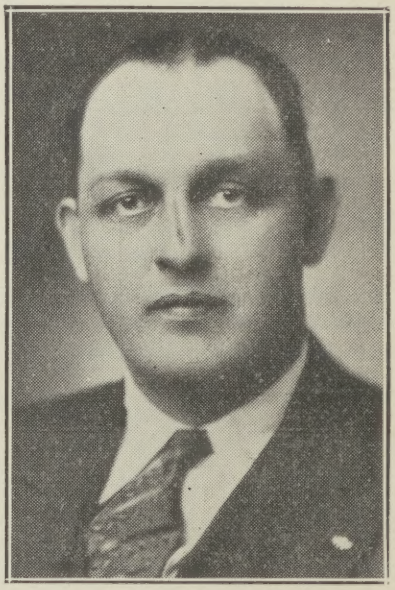
The Mid-South Post Graduate Medical Assembly is the best you can possible attend in this section. It has but few equals and superiors in the United States. You can afford to make a sacrifice to attend. It will be good for you and still better perhaps for your clientele. Medical science is growing just like broom sedge. You have to keep going to keep up. We should rejoice and be exceedingly glad that we are so near to its annual meeting place.

We wish you would subscribe for The Mississippi Doctor. It is a journal with a mission. Take advantage of our "depression price," one dollar for one year, twelve issues.

Have you paid your dues to your local society? If you have not you should manage it some way some how. You owe some of your time and some of your means to organized medicine. Your local society is your mother in the medical profession. If you fail to attend your local meetings and fail to pay your dues, you could hardly be depended upon to give time and love and financial support to your mother. It is not a matter of convenience, it is a grave duty that you should grit your teeth and meet. Your medical dues is the oil that keeps the machinery of organized medicine turning. Any country boy can get to school, or could, on a nice bright day, but the student that you might watch for future success, will be a little ahead of time on a rainy bad morning. In flush times almost any man will pay his dues rather than to be bothered. But in times like this if you have the extra ordinary stuff inside, you will just pay any way. Let us pay as promptly as we can. Dr. Acker gives us lots of time without any pay. We should appreciate it. Ingratitude will impoverish the soul of any man. We should have pride. Since Dr. Acker is our state president we should give him a hundred percent membership through society pride. It will pay you to pay your dues. Don't forsake the society, don't neglect the mother of your profession, your local society. Pay your dues.

The Ole Miss Medical Department is still on probation. All of our other state colleges are back in regular standing. The medical department should be. It has rendered too much service in the past and it has too much work to do, to be destroyed at this time. Ole Miss has graduated about four hundred students in the two year medical course. About ninety-five percent of them have gone ahead and graduated from other schools. One third of this number are now practicing in Mississippi. Graduates of the Ole Miss Medical school have stood high in scholarship. They have made good in practice. They compare favorably with any other students in the last two years and on state medical examinations. In practice they are second to none. They are taught to work at Ole Miss. They are taught to win by merit. Our boys can go here cheaper. It is no time to destroy a school because it can not build a certain building, or maintain certain equipment that tickles the fancy of some theoretical extremist. The spirit of a school counts. The type of young man selected is of the greatest importance. The school that teaches a young man to work in a practical way, the school who takes into consideration the profession mind, the medical soul and the missionary heart of the student is needed at this time. This is the Ole Miss Medical School. The medical profession is swamped with specialists now, about one in four when one in ten is enough. Some of our leaders a few years ago wanted to take short cuts to put out more doctors. We showed the folly of it then, tried to. Some of this type of leaders now think that you have to have a building with a certain number of stories and a pile of laboratory equipment that is exactly like those used in Chicago or New York before you can learn. Too much equipment is leading to weakness and inefficiency in many ways. The students are taught in terms of expensive hospitals, internes, nurses, laboratories etc. They can't do practice in the small town or rural community, or won't do it, hence the country folk suffer for ordinary everyday medical service. It is not fair for the Ole Miss Medical Department to be destroyed. The medical profession of Mississippi must not permit it. Speak out in the meeting. Write The Mississippi Doctor what you think.

The committee on the Cost of Medical Care has done some good work. There is much more to do. We thank the committee for the service it has rendered. The problem is not yet solved. If the medical profession does its full duty, we will not have state medicine. The rank and file of the profession must have more money and the masses must have better service for less money. This can be accomplished through th means of the well ordered clinic and the small hospital out on the firing line hard by the people. We must strike an average, cut off half of our specialists and raise the batting average of the practitioner. We need to revise our medical schools to teach practical preventive medicine and surgery.



Dr. L. H. McDaniel, our 1933 head of the Mid-South Medical Assembly, though a practising physician of Tyronza, Arkansas for the past ten years, hails from his native city of Covington, Tenn. He is the youngest president the association has ever had, or far as we know, but holds an enviable succession of rises both in his social and professional career. After being graduated from Erskine College, Due West, S. C., he came to Memphis to get his degree in medicine from the University of Tennessee College of Medicine, afterward serving an internship at the Baptist Memorial Hospital. A member of the Phi Chi medical fraternity; a Knight Templar, Jonesboro, Ark., a member of the Scottish Rite, Little Rock, Ark.; a member of the Shrine, Sahara Temple, Pine Bluff, Ark.; he in addition to his professional interests holds the presidency of the Poinsett County and Tyronza Board of Education, is medical adviser for the Poinsett Red Cross, makes radio addresses of political, civic and educational nature and is well-known in Arkansas medical circles for his addresses and original work on "Pellegra."

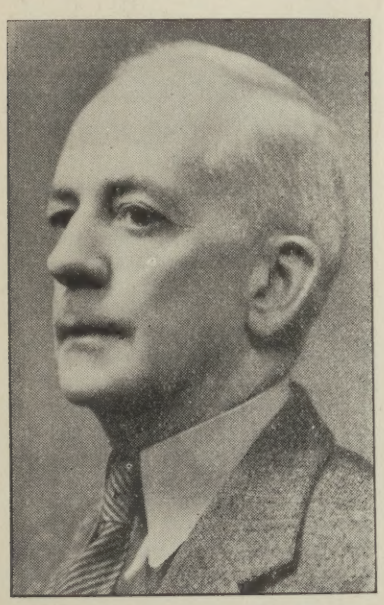
Dr. McDaniels is quite easy in manner, but he is active and aggressive in leadership. He has worked hard for the success of the meeting. He will preside with grace and efficiency. He makes the following statement.

The Program Committee has exerted every effort to make the 1933 meeting of the Mid-South Post Graduate Medical Assembly, formerly known as the Tri-States Medical Association, the banner meeting of its history. In this

day of depression, when a dollar and the value of a dollar looms tremendously before us all, we hear everywhere the clarion call of economy and elimination of the non-essentials and superfluous. With that idea in mind, the program committee has eliminated the Banquet this year along with other unnecessary expenses so in spite of the distressing economic conditions no physician within a radius of two hundred and fifty miles of Memphis is justified in missing this meeting.

The speakers, this year, are the leading medical authorities of the country so an instructive as well as a pleasant four days is in store for every physician who attends this assembly.

L. H. McDANIEL, M.D.
President.



The above is a likness of Dr. A. B. Dancy of Jackson, Tenn., the incoming President of the Mid-South Post Graduate Assembly. He stands high in the medical profession of the state of Tennessee. He is not only well versed in his profession, but he has culture and refinement based on a broad education. He is graceful and easy of manner. He will make a fine presiding officer. He also has vision for the association.

Percy W. Toombs

A tower is fallen, a star is set! Alas! Alas! for Celin.

These word of lamentation from the old Moorish ballad must have risen to many lips when the medical profession learned that Percy W. Toombs was dead. Too, the thought must have been more instant and the cry of sorrow more expressed among the vast laity of motherhood whose golden thread of personal feeling vindicated his real greatness—service to mankind.

Dr. Toombs was a native of Mississippi, born in Greenville in 1880, the son of Reuben Saunders and Fannie Toombs. After receiving his public school education in Greenville, he was graduated at the age of twenty from Georgetown College, Georgetown, Ky., in 1901, and was awarded an LL.D Degree from the same institution in 1926. He received his M.D. Degree from Tulane University in 1905, and during his final year there he delivered the Founder's Day oration, a coveted honor—the only student in the history of Tulane to be so honored. The following year he began the practice of medicine in Greenville, and for the next two years assumed the additional offices of district surgeon for the Yazoo & Mississippi Valley and the Southern Railroads, and served as president of the Greenville Board of Health.

Moving to Memphis in 1907 he taught physiology at the College of Physicians and Surgeons (now the College of Medicine, University of Tennessee) until 1909, when he became professor of obstetrics and obstetrician-in-chief of Baptist and General Hospitals, which posts he held until his death. From 1908 until 1916 he was district surgeon of the Illinois Central Railroad.

In 1915 Dr. Toombs married Miss Amy Randolph Morton, of Memphis, a woman of high intellectual attainment and charm, and a helpmate suited in ideals and understanding to his greatness.

In 1923 Dr. Toombs began a campaign for a separate and distinct unit of General Hospital for the care of maternity cases. The Maternity Pavilion was erected the following year and stands as a lasting memorial to his efforts to achieve better obstetrical service for less fortunate women. A director since its erection, Dr. Toombs has led in the work for which the building was dedicated, giving pre-natal, natal and post-natal care to many whose lives might have been sacrificed upon the altar of maternity.

At the time of his death Dr. Toombs was President of the Central Association of Obstetricians and Gynecologists, President of the Memphis and Shelby County Medical Society, a fellow of the American Medical Association, a member of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, of which he was vice-president in 1929-1930; a member of the Tennessee State Medical Association, of the Academy of Science, of the American Editor's and Authors' Association, of the White House Conference Child Welfare Committee; an honorary fellow of the Kansas City Southwest Clinical Society; a member of the Episcopal Church, of the Phi Delta Theta literary and Phi Chi medical fraternities, a 23rd degree Mason, a Knight's Templar and a Shriner; is listed in Who's Who in America, in the History of Tennessee and the Mid-South and Its Builders.

Dr. Toombs was the author of more than fifty medical treatises and books, "The Romance of Surgery," which follows in this issue,

being a brilliant article of research to whose pages the achievements of the author might well be added for the kaleidoscopic view future generations will take of the present. Besides occasional contributions to the daily press, he was a contributor to the Memphis Medical Monthly, American Journal of Obstetrics and Gynecology, Southern Medical Journal, Illinois State Medical Journal, Mississippi Medical Monthly, Alabama State Medical Journal, American Journal of Surgery and The Mississippi Doctor.

Dr. Toombs followed his father in choosing medicine, and throughout his academical career he evidenced a brilliant mind, being graduated from Georgetown College and Tulane alike with first honors. In 1914 he studied in the clinics of Berlin, Paris and London. Always an ardent worker to reduce America's maternal mortality, giving unstintingly of his time and skill to charity, and laboring untiringly through his writings and addresses throughout the country, he proved himself a true leader in the profession, which can but mourn the loss of one of its greatest who was cut down in the middle of his career.

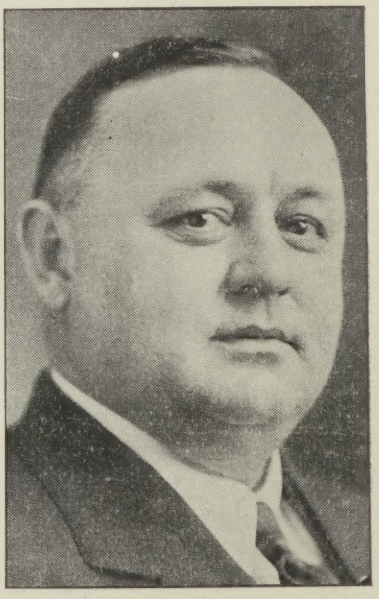
We would not approach Percy W. Toombs along the beaten paths of eulogy, for, though his field in the profession is as old as the sons of Eve, he made a definite advance over all the past. It has been said that medicine and civilization advance and regress together; that the position of woman is the index to that civilization, her position being gauged by the care given her at the birth of her child. To overthrow superstition, to protect motherhood from pain, to free childhood from sickness, to bring health to all mankind: these are the ends for which the saints and martyrs of medical science have worked and fought and died through the centuries. Percy W. Toombs' banner bore the same noble device, but he carried it to the pathless heights; he possessed the same intellectual courage and consummate love for humanity, but he prevailed further even than he knew.

So, to be cold and breathless is not the end of existence to a man whose lofty spirit has conceived, resolved and labored; for whose greatness nothing was too small; whose doctrine was a strenuous life; who treated difficulties as passing clouds overshadowing his garden —a garden which bloomed; whose high-erected thoughts were seated in the heart of courtesy; and whose fearless mind climbed to a crown.

These shall resist the empire of decay,
When time is o'er and worlds have passed away;
Cold in the dust the perished heart may lie,
But that which warmed it once can never die.

This is his life, and this his eulogy.

"In the death of Dr. Percy Toombs the Medical profession in Tennessee, as well as Mississippi and the entire South, has suffered a distinct loss. He was a leader in his line of work, giving his talents and time unselfishly to his large practice. Being born in Mississippi it is with special pride that we point to his many deeds and brilliant accomplishments. May there be consolation in the fact that because of his noble life and work many lives were born and saved."—Dr. J. M. Acker, Jr., Aberdeen, Miss., President Mississippi State Medical Association and Secretary Northeast Mississippi 13-County Medical Society.



The above is a likeness of Dr. F. L. McGahey, Calhoun City, Miss., president of the Northeast Miss. 13-County Medical Societ. He is a native of Mississippi, Webster county. Here he received his preliminary education. He took his college work at Millsaps College. He received his medical degree from the University of Tennessee and spent two years as an interne in the General Hospital of Memphis. He served 13 months in the Medical Corps of the U. S. Army in France and Germany. He was discharged July 9, 1919 and he still holds a commission in reserve Corps as Captain. After his return from the army he practiced at Oakvale for eight years and has now been at Calhoun City for four years.

Dr. McGahey is a very active and able practitioner. He is a wide awake citizen who takes an active part in public affairs. He has a hearty handshake and a generous disposition. He goes about doing good cheerfully. He will make a splendid presiding officer. He will do his best to lead us forward. We extend to him our congratulations and offer him our right hand of co-operation. We will gladly follow his leadership.

We must spend and be spent in the endless battle for right against wrong.—Theodore Roosevelt.

The Romance of Surgery*

BY PERCY W. TOOMBS

Romance is largely a matter of perspective. The most commonplace landscape, viewed through the small end of an opera glass, has cast over it a certain glamor, a charm such as is exerted upon us by a Japanese miniature garden or a ship model. The events of our childhood have an interest in our adult years, quite out of proportion to their actual importance, so skilfully does the lens of memory perform its functions. In the same way we find romance in the early history of a race, a country, or even a manufacturing process. Only the present is prosaic; in "olden times" men were braver, women were fairer, and the sun shone more brightly than it does today.

So, in order to tell you something of the romance of surgery, I must go back to ancient times. If I were to detail the remarkable things which are being done this very day and hour that would be news, not romance, and you would feel cheated. In speaking of things medical it is customary to go back to Hippocrates, "the Father of Medicine." But as Hippocrates was a cultivated Greek, it is evident that romance began much earlier than his time. To track surgery to its original lair, we must go back to neolithic man.

The first evidence of human activity found wherever man has lived has always been the roughly triangular chipped flint—called in this country the "Indian arrowhead." And it was undoubtedly this same ancient, widely applicable tool which was employed to perform the first surgical operations. Garrison suggests that it was probably "some fragment unusually sharpened as to edge and point by accidental flaking, as in the obsidian knives of Peru. By means of these sharpened flints, or of fishes' teeth, blood was let, abscesses emptied, tissues scarified, skulls trephined, and, at a later period, ritual operations like circumcision were performed. . . .Trephining for epilepsy or other cerebral disorders goes back to prehistoric times, the finds showing that it was often done more than once upon the same person, the bits of skull excised being used as amulets. . . . Primitive man's wounds were dressed with moss or fresh leaves, ashes or natural balsams, and when poisoned, treated by sucking or cauterization. Cupping was performed by means of animals' horns. The revulsive effects of some accidental wound or hemorrhage, or the natural and periodic process of menstruation, suggested, no doubt, the advantages of blood-letting, which was to become a sort of sheet-anchor through the ages. For couching a cataract or opening an abscess, even a sharp thorn sufficed."

When the human intellect was sufficiently developed to permit working in metals, surgical instruments shared the improvement in knives, needles and weapons of war. Yet in the comparative modernity of the Ages of the Pharaohs we read that Zipporah, the wife of Moses, "took a sharp stone and cut off the foreskin of her son." The people who built the pyramids still employed the surgical methods of the dawn of time. This is indeed symbolic of the manner in which surgery—today the highest branch of medical art—was for untold centuries despised and neglected, the physician being an honored member of the community wherein the surgeon (when he had finally come to be recognized as such) remained a vagabond and outcast, even less respectable than the hangman and the barber. Though medicine attained a considerable degree of excellence in the golden age of Greece and Rome, surgery was not sufficiently recognized to have a distinctive name. Of its very existence we guess merely from indirect reference, as when Hippocrates says that "I do not cut for stone, but leave that to those whose business it is to do this." The Greeks considered the human body to be a temple, far too sacred to be defiled by exposure of those parts which a Higher Power had seen fit to hide from human eyes. Autopsies were not permitted for the same reason. When in later centuries the Christian doctrine of the resurrection of the body spread through the regions where once the gods of Mount Olympus had held sway, this acted as a deterrent to any examination of dead bodies which might have made it possible for surgeons to give aid to the living. Even in our own day this attitude of mind has not entirely faded, as was witnessed by the woman who was urged to permit the school doctor to remove her children's adenoids, on the ground that leaving them might so injure their health that they would fall an easy prey to any disease with which they might come in contact. She only shook her head and answered: "I aim to bury 'em with all their parts in."

During the Middle Ages the practice of medicine remained entirely in the hands of the clergy, and we find in the old ecclesiastical law codes many rules and regulations relating to this part of their duties. If a patient died after the administration of medicine, it was the will of God—why should man seek vengeance? But if he died after some over-zealous cleric had invaded an unbroken abscess with a knife, or otherwise interrupted the continuity of the covering an All-Wise Creator had seen fit to place about his "hidden parts," it was as plain as a pikestaff that the fatal outcome was due to this unwarranted interference with the course of nature. From this viewpoint it is not hard to divine why the practice of surgery was neither popular nor honored during the Age of Faith. The physician remained one with the priest and was reverenced as the mouthpiece of Deity. The sufferer who had the hardihood to

*Read at meeting, February 11, 1930.

seek relief by other means than charms, application of religious relics, or strange medicaments such as those brewed by the witches of "Macbeth," must seek it from the hangman or the barber.

Yet despite all this, the practice of surgery, as apart from medicine, was continued and gained in favor and employment as time went on. By the fourteenth century itinerant surgeons who cut for stone, couched for cataract, or dressed wounds, appear to have been fairly plentiful, for we learn that "in 1337, a strolling eye surgeon was thrown into the Oder because he failed to cure John of Bohemia of his blindness, and in 1464, Matthias, King of Hungary, issued a proclamation that whoever cured him of an arrow wound should be richly rewarded, but failing that, should be put to death. These barbarities," remarks Garrison, "point their own moral, for the strolling medieval mountebanks, in couching a cataract, sometimes put out an eye, mangled the viscera in 'cutting' for stone, and, in attempting to effect a 'radical cure' for hernia, as Baas says, not infrequently excised 'the radix of humanity itself.' Allbutt gives a striking picture of a medieval incisor who, while ligating an artery, paralyzed his patient's arm by crushing the musculo-spiral nerve, and was afterward pursued with curses by his miserable victim whenever he dared show himself in the street. If the Church 'abhorred the shedding of blood,' therefore, it is fair to suppose that in the first instance its aversion had the same human significance as the well-founded horror of hospitals and surgical operations which existed in the minds of the laity up to the end of the nineteenth century."

At a time when the monk's tonsure distinguished him from the layman with his abundance of hirsute adornment, the barber was a servant peculiar to the religious houses. As bleeding came to be regarded as the sovereign remedy for most human ills, and a good general preventative to be applied at regular intervals whether one needed it or not, the monks found it necessary to be bled at certain seasons and being themselves forbidden to serve one another in this capacity, it came about that shaving, hair-cutting and bleeding were naturally all delegated to the same attendant. Thus arose the 'barber-surgeons' to whom we owe the beginnings of the fine art of surgery as we know it today. Surely surgery may be called the Cinderella of the arts, for it was from the dust and ashes of the meanest servant's quarters that the surgeon rose to be the honored companion of kings. Where can we find greater romance than this?

With the Renaissance, the science of medicine shared in the re-birth of learning, and even its despised hand-maiden, surgery, felt the awakening impulse. As Osler has put it, "The sixteenth and seventeenth centuries did three things in medicine—shattered authority, laid the foundation of an accurate knowledge of the structure of the human body, and demonstrated how its functions should be studied intelligently." The ancient theories of Hippocrates and Galen, reverenced for more than a thousand years, were recognized for the futile nonsense which they appear to us today—the study of anatomy, no longer frowned upon, became the pre-occupation of the most learned men of the age, and anatomical illustration the lifework of the greatest artists. Osler cites Mundinus' work on anatomy, in which a "quaint illustration shows us the medieval method of teaching anatomy: the lecturer sitting on a chair reading from Galen, while a barber surgeon, or an 'Ostensor,' opens the cavities of the body." The Doctor of Medicine would not deign to touch the corpse—usually that of an executed criminal—used in demonstration, but in order to give his students the necessary insight into the workings of physiology was forced to call to his aid the despised "incisor." Thus did the surgeon make his first appearance in the ampitheatre where he is now the chief figure.

Late in the Middle Ages we find men living, working and writing who no longer feared to be known as surgeons. This was the age when medical schools first came into prominence and esteem, and at that of Montpellier—first chartered by a papal bull issued in 1289—lived and taught the first real surgeons of whom we have accurate knowledge— Henri de Mondeville and Guy de Chauliac. Though de Mondeville's treatise on surgery was never printed until 1892, it had an immense vogue in countless manuscripts long before Gutenburg's invention. Garrison tells us that "it abounds in directions of the rarest common sense for the aseptic treatment of wounds and in shrewd practical advice to the surgeon as to the conduct of his professional life. In opposition to the salve surgery of the Galenists, Mondeville advises simply to wash the wound clean and put nothing whatever into it, since 'wounds dry much better before suppuration than after it.' For hemorrhage he recommends styptics, digital compression, acupressure and torsion of the isolated vessel by means of a sliding-noose ligature: Some of his advice to his surgeon readers has an oddly modern tone. 'Many more surgeons know how to cause suppuration than to heal a wound.' 'Keep up your patient's spirits by music of viols and ten-stringed psaltry, or by forged letters describing the death of his enemies, or telling him that he has been elected to a bishopric, if a churchman.' 'Never dine with a patient who is in your debt, but get your dinner at an inn, otherwise he will deduct his hospitality from your fee'." That fees were not always easy to collect is suggested by this bit of wisdom, and the fact that the first surgeon of his time had this advice to offer gives us an insight into the roughness and steepness of the path by which he had climbed to eminence.

A far greater surgeon and from the evidences

which have come down to us, one much nearer the prototype of the ideal healer of human ills, was de Mondeville's successor, Guy de Chauliac, who was twenty years old at the time of de Mondeville's death in 1320. He was educated for the priesthood, but in some way managed to get good instruction in anatomy at the University of Bologna, as well as studying at Montpellier, and the University of Paris, then as now the center of medical learning for that part of Europe. As the popes were in exile at Avignon at that period, the young surgeon selected that city as a good location for one of his attainments, and here he settled as a physician and chaplain to the Pope himself. His "Chirurgia magna" (Great Treatise on Surgery), written in the middle of the fourteenth century, is an excellent exposition of the art as practiced at that period. Personally he regarded the study of anatomy as the chief part of the surgeon's education, and he seems to have been practically the first educated physician who undertook the work heretofore left to ignorant menials—the performance of the operations for cataract and hernia. But even he, apparently, feared to cut for stone. He recommends excision of cancerous growths with the knife, if they are discovered when still small, but whether or not he actually did this himself is uncertain. He burned away small growths upon the skin, and employed the cautery also upon necrotic and gangrenous tissues. He advises placing a collar or protector of lead about ulcers and abscesses, very much as is nowadays frequently recommended for the treatment of corns and bunions. A broken arm or leg was to be suspended in a sling bandage, and for legs likely to shorten the weight and pulley is recommended—quite in the modern manner. In his discussion of the treatment of bones he does not neglect the teeth, and his volume gives us practically all we know of the practice of dentistry at that period.

But surgeons such as these two just mentioned were but points of light in the deep gloom which hung over the practice of their profession for many hundreds of years thereafter. Surgery continued generally to be in great disrepute, the frown of the Church and other causes already cited being more or less operative until comparatively modern times. Though the sixteenth century produced such men as Ambroise Pare in France; Tagliacozzi in Italy, known throughout the civilized world for his skill in replacing lost noses, and regarded today as the 1st of plastic surgeons; Pierre Franco, the Hugueenot refugee in Switzerland, who made the "cutting for stone" of the barber surgeons into the respected operation of lithotomy which has come down to our own day; and William Clowes, who was surgeon at Saint Bartholomew's Hospital, London, in the days of Queen Elizabeth; in general, as Clowes himself said, the surgeons of that time were "no better than renegades or vagabonds . . shameless in countenance, lewd in disposition, brutish in judgment and understanding." The actual status of these so-called surgeons, he informs us, was that of "tinkers, tooth-drawers, peddlers, ostlers, horse-gelders and horse-leeches, idiots, bawds, witches, conjurers, sooth-sayers and sow-gelders," with several other epithets not acceptable to modern ears.

Yet even among these, there were some who contributed not a little to the romance of surgery. In the year 1500, a German sow-gelder, one Jacob Nufer, found himself about to become a father for the fourth time. For nearly a week his wife lay in labor—all the midwives for miles around had struggled in vain to relieve her—the universal opinion was that she must die undelivered. Now though sows had a definite market value, whereas women were to be had for the asking, Jacob Nufer had found his wife useful and satisfactory, and he doubted if she could be easily replaced. He reasoned that what he was accustomed to do harmlessly upon his porcine patients might equally well be carried out upon a woman. He, therefore, prayed loudly to God to give skill and speed to his hand, and heedless of the horrified protests of the multitude of impotent bystanders, made use of his gelding knife to perform the first Caesarean section upon a living woman, which has a successful outcome. His wife lived to be seventy-seven and bore a large family in the natural manner. This had led students of the history of obstetrics to doubt whether Nufer actually incised the uterus, thinking that the evidence points rather to an ectopic pregnancy. But granting this, Nufer's feat still places him at the head of obstetric surgeons in priority, and it is an interesting reflection that he obtained his training and skill by practicing upon animals—exactly as do the surgeons in our present schools of medicine.

The advance of surgery during and after the sixteenth century may be well measured by the progress made in obstetrics and gynecology. While the conduct of normal labor was regarded as a purely feminine function for more than three hundred years after Nufer's exploit, the midwives more and more often sought aid when difficulties arose, and by the year 1700 we begin to hear complaints of the meddling of mere men, who, not content to advise and direct, had begun to take matters into their own hands, remaining in the lying-in chamber throughout the delivery—which was most indecent—and, worst of all, collecting fees for this outrageous interference, fees far in excess of those any woman could hope to command.

The obstetrical treatises make very fascinating reading—I speak here, not as a practitioner of this special branch of medical art, but merelyly from the literary point of view. As far back as 1550, when Pare wrote his treatises on surgery, the handling of difficult obstetrical cases had been carefully considered from the surgeon's point of view. He it was who revived the operation of podalic version, known to

the ancients but abandoned and forgotten during the Dark Ages which succeeded the fall of Rome. Before Pare wrote, several treatises on childbirth had been published, but its surgical aspects had received scant attention. In an edition of the great French surgeon's works republished at Paris in 1840, the modern editor remarks that this description of podalic version is "the most original thing in the book," inasmuch as "neither in Roeslin nor in Rueff, nor in any other author before Pare, has version by the feet" been recommended, an operation which "certainly appears to have been of French origin, and indeed to have had its birth among the barber-surgeons of Paris," among whom Pare was originally numbered.

Pare had a pupil named Martin Boursier, who took for his wife a smart young woman who was called Louise Bourgeois. The fact that these two lived for many years under Pare's roof offers at least a partial explanation of the manner in which Louise came to be the foremost midwife of her time, attending Maria di Medici at the birth of the infant who later became Louis XIII of France. In her later years Louise wrote a manual for her professional sisters, which remained a standard work for a long period of time, not even being displaced by that of the 'man midwife,' Francois Mauriceau, which was published almost sixty years later. Mauriceau appears to have been one of the first—if not the very first—surgeon who devoted himself exclusively to 'female complaints.' That he entertained ideas somewhat in advance of his time is shown by his description of the manners and deportment proper to the 'man midwife' which I find quoted in Potter's Version.

The accoucheur "must be healthful, strong and robust; because this is the most laborious of all the operations of surgery; for it will make one sometimes sweat, so he shall not have a dry thread, though it were the coldest day in winter. He ought to be well shaped, at least to outward appearance, but, above all, to have small hands for the easier introduction of them into the womb when necessary; yet strong with the fingers long, especially the forefinger, the better to reach and touch the inner orifice. He must have no rings on his fingers and his nails well pared, when he goeth about the work, for fear of hurting the womb. He ought to have a pleasant countenance and be as neat in his clothes as in his person, that the poor women who have need of him be not affrighted at him. Some are of the opinion that a practitioner of this art ought, on the contrary, to be slovenly, at least very careless, wearing a great beard, to prevent the occasion of the husband's jealousy that sends for him. Truly some believe this policy augments their practice, but 'tis fit they should be disabused; for such a posture and dress resembles more a butcher than a surgeon, whom the woman apprehends already too much that he needs not such a disguise. Above all he must be sober, no tippler, that he may at all times have his wits about him."

One can easily picture Dr. Mauriceau—neat, dapper and cheerful—a far, far cry from the vagabonds and mountebanks of an earlier century. That the surgeon—at least he who devoted himself to obstetrics—had begun to take his profession very seriously, is indicated by the following passage from the work on obstetrics written by Pierre Dionis, another French accoucheur of the same period: "In difficult labors Nature often does a great deal, but in unnatural ones there is nothing to be expected from her; it is the surgeon alone that must do the business. The life of both mother and child is then in his hands and he has a fair opportunity given him to show his skill and dexterity in turning the child in the womb, and bringing it into the world, whereas, without this assistance, it can never see the light." In pursuance of this laudable endeavor, "the surgeon, having put a napkin or towel about his waist, must sit down before the woman on a low stool, as near her as may be, that he may give her the necessary assistance with the greater convenience and ease, and take a nap now and then in the intervals of her pains." He condemns the practice of some obstetricians who advocate binding the patient. "Has she not enough to complain of, though she be not bound with cords like a wretched criminal? . . . Three strong women, holding her safe, as we have directed, will do the business very well," to which Potter makes the addendum, "We can easily believe him!" That Dionis looked upon his profession with profound respect is evidenced by his reference to the measures necessary to combat placenta previa and eclampsia, then as now most draded among obstetric complications. "A great many women who have had most of these terrible symptoms," he says with pardonable complacency, "have been happily preserved by the friendly and seasonable help of the Artist" (emphasized by a capital A).

The seventeenth century saw the last of the strife between physicians, surgeons and barbers, which had been rampant for several hundred years. "In France," Garrison tells us, "the medical profession had consisted for centuries of an aristocracy of physicians, a petite bourgeoisie of clerical barber-surgeons, and proletariate of laic barbers or outcast surgeons, (barbitonsores), all hating and despising one another and adhering to rigid caste distinctions. When, after the foundation of the College of St. Come, the surgeon was in a manner assimilated to the status of the physician, he began to put on airs like the latter, wearing the square cap and long robe, substituting the device of three boxes of ointment upon his guild-banner for the traditional three basins (the barber's sign). . . . The physician had become a sterile pedant . . . and instead of studying and caring for his patients, tried to overawe them by long tirades of technical drivel, which only concealed his ignorance of what he supposed to be

their diseases. . . . The lay barber, although an outcast and an outlaw, was in some respects the most worthy of all three, since he was driven to study nature at first hand . . . out of his clan had come Franco and Pare. . . . The curious isolation and sterile inefficiency of the French internists of the seventeenth century are strikingly revealed in the letters of Guy Patin, Dean of the Paris Faculty, who regarded the surgeons as mere "booted lackeys . . . a race of evil, extravagant coxcombs who wear mustaches and flourish razors, in 1686, however, an event occurred "which changed the attitude of the civilized world toward the despised and lowly surgeon. Every medical device had been vainly invoked to cure the exquisitely painful anal fistula from which the French king, Louis XIV, the greatest potentate of his age, had long suffered. When Felix, the royal surgeon, finally succeeded in healing it by operation. Louis' gratitude not only heaped wealth and honors upon Felix himself, but it redounded to the credit of the entire surgical fraternity. The royal surgeon was ennobled, and Felix's successor in this now enviable position was able to elevate permanently the social status of the surgeon, to equal or even excel that occupied by the physician. Thus did the "Grand Monarch," Louis the Fourteenth, "influence French medicine in three curious ways: His attack of typhoid fever gave an immense vogue to the use of antimony; his anal fistula brought about the rehabilitation of French surgery; and the fact that his mistress was attended by Clement, the royal accoucheur, in 1663, did much to further the cause of male midwifery."

From the beginning of the eighteenth century onward to our times, the surgeon came into his own. One must pick and choose now among a multitude of romantic eisodes which marked the careers of the men whose names shine most brightly upon the pages of surgical history. There is the career of Percival Pott, whose name is still with us in Pott's disease—tuberculosis of the spine—and Pott's fracture —unpleasantly familiar to most of those who have suffered the misfortune of a "broken leg." Pott's father died in 1721, when the future surgeon was scarcely seven years old. His mother married again, and the step-father managed in some way to dissipate the small property which had been left the boy, so that at seventeen he was without means to obtain an education. Nevertheless he managed to serve an apprenticeship in surgery and at twenty-one set up as a practicing surgeon, bringing his mother and little half-sister to London and installing them in a house of his own, thus fulfilling his avowed ambition of restoring his mother to her original social position. Laboring unceasingly he rose eventually to be chief surgeon of St. Bartholomew's Hospital, becoming the best known of English practitioners while he was still a young man. He found a husband for his sister, but remained unmarried himself until he was almost forty—until his mother died. He feared that to bring a daughter-in-law into the house he had so proudly provided for her might humiliate her and destroy the comfort and happiness it had been his privilege to bestow on her. Pott's fame rests largely on his surgical writings, and his treatment of the fracture of the fibula which still bears his name, and both of these were due to what, at the time, appeared a frightful misfortune. Riding from the hospital to make a professional call, his horse fell and rolled upon him, producing a bad fracture at the ankle. At that time the surgeon knew but one way to treat such an injury—that was, to amputate the leg at the knee. But Percival Pott, lying sorely injured in the filthy London street, was still the thoughtful and alert head surgeon of the greatest hospital in all England. Refusing to permit the bystanders to move him, he ordered them to buy a door and secure the services of two strong porters. This done, he gave exact dirctions as to how he was to be lifted upon the door, laid beside him upon the cobblestones, and just how the porters were to walk, so as to carry him with the least possible disturbance of the fractured ends of bone. Arrived at his own home, his frightened colleagues from the hospital gathered about him, condoling with him on the loss of his leg. Admitting that the proper attitude of a patient is to submit implicity to the judgment of his medical attendant, he yet made bold to suggest that the bones, having been so slightly disturbed, might yet be set so as to become reunited and he hoped earnestly that they would at least consider his plan bfore using the knife. Though convinced that he was but planning his own destruction, his colleagues did as he wished; the bone knitted, and Pott walked again, though it was many months before the final triumph of his treatment was assured.

During his long period of inactivity, the crippled surgeon turned to writing, and in rapid succession turned out treatises on hernia, head injuries, hydrocele, fractures and dislocations, and finally, the pamphlet on spinal caries, which first called the attention of the medical world to that particular form of a prevalent malady which is now known as "surgical" tuburculosis. Most of his bone tuberculosis patients were children, and we are told that he was particularly kind and patient with them, and gave unstintedly of his time and professional attention to the poorest, a veritable "labor of love." It is pleasant to think that after this devoted son felt himself free to marry, he found a congenial helpmate and, though middle-aged, became the father of a good-sized family.

Of far different temperament was the great English surgeon who came after him—John Hunter, who is usually ranked with Pare before him, and Lister, who came after him, as one of the greatest surgeons of all time. It is to Hunter that the surgical profession in America must look as its founder, for the first sur-

geons on this continent were, many of them, his pupils, and his influence was felt more strongly on this side of the Atlantic than that of any other European medical man. Hunter was so violent in temper and dogmatic in statement that he made few friends; yet so great was his learning, and so powerful his personality, that his impression upon the profession he chose abides until now. His pupils, and the pupils of those pupils, fill up the ranks of surgery in the early years of the struggling little nation, which now supplies medical men and knowledge to the entire civilized world.

Of these romantic figures I can mention but a few—the life of any one of them would supply material for an entire evening's consideration. My own attention has not unnaturally been especially directed toward Ephriam MacDowell, who was not a pupil of Hunter, but of the great John Bell of Edinburg. MacDowell, working in the then wild country of Kentucky, performed the first ovarian tumor excision ever undertaken, his patient riding on horseback sixty miles into Danville to undergo the operation, and returning by the same mode of conveyance only twenty-five days thereafter. In recalling the intrepidity of this pioneer gynecologist, we should not forget to honor the patient as well, for when we consider that anesthesia was not introduced until nearly forty years after, and that Mrs. Jane Todd Crawford was approaching her fiftieth year when MacDowell suggested the operation to her, her heroism fully equals, if it does not surpass, that of her surgeon.

Born five years before the declaration of Independence, MacDowell died in 1830, so that his entire life was passed prior to the revolutionary discoveries of anesthesia and asepsis. Fortunate, therefore, was James Marion Sims, who came into the land of promise and opportunity in 1813, and lived until 1883, when surgery, as we now know it, was an established fact. He began his professional career in Alabama, where he soon gained a reputation for skill and success as a surgeon. It was in the year 1845 that he was summoned far into the country to see a young woman who had fallen from her horse and sustained a serious uterine displacement. "In making a digital examination to correct the displacement, he hit upon the peculiar lateral posture" since known as the Sims position, and was likewise offered the suggestion which led to his designing the special duck-bill speculum still bearing his name, enabling the operator to see the condition 'as no man had ever seen it before.' He also made use of a silver wire to avoid sepsis, and a new catheter for emptying the bladder while a vagino-vesical fistula was in process of healing. These additions to his armamentarium, devised to meet an emergncy of country practice, now put him in a position to treat successfully the fistula just mentioned—up to that time the most intractable condition with which gynecologists had to deal.

Thus did the romance of American surgery have its beginnings. The rest of the story is just as wonderful—but as we approach our own time, the focus of our glass changes—the achievements of Crile, Carrell, and the Mayos —to mention at random a few of many eminent names—are not yet romance. That view of them remains to be taken by the generations which come after us.

Benefit of Radiology in Diagnosis

BY W. R. BETHA, M.D.

Sir William Crookes, an English Scientist, invented the Crookes Tube in 1878. Wilhelm Konrad Roentgen, born near Zurich, Switzerland, a professor in University of Wurzburg, experimenting with the Crookes Tube in April 1895 discovered X-rays, and reported his discovery in September of the same year.

The laboratories of those days were crude and the apparatus was very inferior to the present day modern apparatus. The development has been too rapid and is too well known to need discussion.

Today we have in this comparatively new apparatus one of the leading and most widely used methods of diagnosis of human ills. Practically every system of the human body can be visualized thru the use of X-Rays. Thus one brings into vision the shadows most acute of all the special senses of man, the human eye.

Such study has become so important that at the International Congress of Radiology in Stockholm in 1928 a committee of leading radiologists from every country in the world was formed to formulate teaching plans for the instruction in Radiology in the Medical Colleges all over the world.

In the X-Ray study of the skeleton one looks for malformations such as ill shaped bones, crooked and irregular, supernumerary, or even the absence of some bones; pathology of bone as osteomyelitis, osteitis, malignancies, cysts, osteoma, periosteal changes, rickets, scurvy, osteo-malacias, etc.

Fractures of various kinds were the first use of the rays in diagnosis. Dislocations of the joints, epiphyseal changes, arthritis, sesamoids, and loose particles of bony formation about the joints are all detected by the X-Rays.

The nasal accessory sinuses are very accurately studied by radiographs. The size, shape, degree of development, and absence of the sinuses are noted. Teeth may sometimes be found totally or partially in the maxillary sinuses. Cloudiness or density denoting disease, sclerosis of bony walls in chronic cases may be determined. Also growths, as maligant, osteoma and polyps. In the study of sinuses opaque substance as lipiodol can be used to an advantage in detecting growths and the amount of thickening in the mucosa.

The fluoroscope is of value in addition to the radiograph in most studies, especially in

the chest where we have the cardio-vascular, the pulmonary and part of the lymphatic systems.

The X-Ray study of the cardio-vascular system is very important. The size, shape, position, pulsation, and border wave of the heart are most important in diagnosis. General enlargement is found in myocarditis, hypertrophy, dilatation and pericarditis with effusion. Valvular diseases cause enlargement of one or both of the auricles or ventricles. Study of the aorta is made in reference to dilations, aneurysms, calcifications and length of the aortic chord. The cardio-vascular system should be radiographed at the distance of 7 feet from the target of the tube to the plate with the patient's anterior chest border in contact with the plate.

Pathological conditions of the pulmonary system, which is composed of parenchymatous structure, bronchi, lyphatics, blood supply and pleural covering, are successfully studied by roentgenology. Its use is shown in conditions most commonly affecting the parenchyma such as tuberculosis, characterized by flaky dense lesions of varied formations; pneumonia usually affecting an entire lobe of lung or may be lobar in type; abscesses that are usually centrally located and circumscribed; fungus infections which are rare and are characterized by flaky or somewhat starlike areas thruout one or both lungs; malignant lesions characterized by small rounded nodules either single or multiple; cysts characterized by sharp well defined masses varying considerably in size.

Atelectasis is not uncommon especially in new borns. It is characterized on the X-ray plate by general haziness of a part of one or all of both lungs. Pneumothorax may occur in one or both sides with partial or complete collapse of the lung by air in the pleural cavity.

In the trachea opaque or non opaque obstructing foreign bodies may be demonstrated. There may be collapse of rings of the cartilage from pressure without. Tracheal or bronchial fistula may occur from esophageal lesions. These are easily demonstrated by barium taken by the mouth passing into the bronchi.

The bronchi are ofter increased in density by the acute respiratory lesions as influenza, whooping cough, acute colds etc. Producing bronchitis. Bronchiectasis and abscess cavities are demonstrated by lipiodol. Pleuritic changes are characterized by increased density ranging from a slight haziness to complete cloudiness. Fluid or pus, either general or localized in the pleural cavity, may be detected by the lines of thickened pleura or by the fluid levels producing a more dense line.

Enlarged lymph glands may be seen from acute infections, mediastinitis, mediastinal abscesses secondary to cardio-vascular diseases, tuberculosis, enemias, lympho-sarcoma, carcinoma, Hodgkins disease, etc.

Sub-sternal thyroid glands in adults and thymus glands in children are other causes of widened superior mediastinal shadows.

The diaphragn when studied on radiograph and fluoroscope gives valuable information. Fixation on the affected side is a definite change and easily recognized. Limitation of excursion is due either to lesions above or below the diaphragm. Diaphragmatic hernias of abdominal viscera from weakened openings or lacerations are noted.

The alimentary tract is better studied by radiology than perhaps any other one diagnostic method. The teeth are radiographed for deformities, abscesses, and pyorrhea pockets.

Opaque substance is used in the study of the entire gastro-intestinal tract. In the examination of the esophagus foreign bodies, anomalies, atresia, tracheal and bronchial fistula, cardio spasms, dilations, deformities from disease as malignancy, variation in normal course from pressure, strictures, etc. are noted. The stomach is studied for type, shape, size, position, motility, emptying time, deformity from ulceration and malignancy, external pressure, foreign bodies and size of pyloric opening. The duodenal cap for size, location, deformity as from ulcer, diverticulae, atresia, adhesions, etc. The small intestines for motility, constrictions, foreign bodies, deformities, and location. The appendix for motility, constrictions, foreign material, emptying time, etc. The colon for location, formation of haustra, deformities as ulcerations, malignancies, strictures, diverticulae, spastic areas, polypoid or other benign growths, foreign substances, emptying time, and rectal fistula. Hernia may occur in the intestinal tract thru the diaphragm or abdominal wall.

Obstructions of any part of the ailmentary tract can usually be accurately located by the gas accumulated in the tract above the obstruction or by opaque substance.

Other abdominal viscera which may be diagnosed by X-ray: The liver is studied for size, location, and density. Abscess pockets may be easily located by the increased density and gas in the density. Cysts can sometimes be located. The gall bladder can be very accurately studied by the Graham-Cole method of visualization. Stones may be shown in the gall bladder with or without the opaque substance. Stones, new growths, and enlargement of the pancreas may be demonstrated. The spleen can be outlined on a radiograph and studied for size, density, and calcifications.

Study of the urinary tract has made great strides in recent years. The use of plain radiographs will give the size, density, and location of the kidneys, the presence of stone shadows in the tract. By pyelograms, ureterograms, and cystograms one is able to locate pathology in all parts of the urinary tract as acute nephritis, pyelitis, hydronephrosis, pyonephrosis, tuberculous infections, neoplasms, congenital conditions, strictures, and angulations of uret-

ers, etc. Stones along the ureters are accurately located by introduction of opaque catheters and radiographs with a double tube shift.

The genital organs may be studied for calcifications of ovaries, fibroids, cysts, etc. The use of pneumo peritoneum gives considerable aid in this as well as the study of all the abdominal viscera. Opaque substances as lipiodol will outline the uterine cavity and tubes thus determining the size of the uterine cavity and reveal the presence of any neoplasm encroaching on its lumen. The size, length, location, and patency of the tubes can be easily determined.

Pregnancy after the fourth month can be easily shown by radiograph, revealing the presence of fetal bones. The differential diagnosis between cysts, abdominal tumors, ascites and pregnancy may be made.

The brain and spinal cord are studied both by radiographs, plain, and with opaque and rarefied substances. On plain radiographs one locates blood vessel markings, digitations, and densities, and occasional calcified areas in skull wall, the size and shape of cella notch, and pineal gland if calcified. The size, shape, location, and deformities of the ventricles and their foramina may be noted by replacing the ceregro-spinal fluid with air and radiographing in several positions. Hydrocephalus causes dilatation. Tumors cause deformity and displacement.

The spinal cord and canal are studied by plain radiograph for erosions on the bodies of the vertebrae and encroachment on the lumen of the canal by the vertebrae. Air may be injected into the lower canal and observed under the fluoroscope. By changes in position of the patient the air may be seen passing up the entire length of the spinal canal, thus locating obstructions. Radiographs are also of use in determining the course and source of the circulation of the air in the canal. Lipiodol was formerly used for this purpose but was found to be too irritating. Gas in the tissues as from gas gangrene, emphysema, and in abscesses where gas is generated is easily demonstrated.

Location of foreign bodies in any part of the body, the eye, and soft tissue is very accurately made by radiographs.

To accomplish any task successfully it is necessary not only that you should give it the best that is in you, but that you should obtain for it the best that there is in those who are under your guidance.—George W. Goethals.

"Cast aside business forever except for others—Man must have an idol. The amassing of wealth is one of the worst species of idolatry. No idol more debasing than worship of money."—Andrew Carnegie.

Ole Miss Medical News

By Woodard D. Bearham

Having completed the courses of the first semester and successfully stood the mid-year examinations, students at the Ole Miss Medical School are again hard at work. This semester the first year class will complete the following courses: Anatomy, Neuro-Anatomy, Histology, Embryology, and Physiological Chemistry. The curriculum for the second semester of the second year in medicine includes: Pathology, Pharmacology, Obstetrics, Physical Diagnosis, Clinical Diagnosis, Medicine, Physiology, and Minor Surgery. The first semester the first year group studied: Osteology, Anatomy, Histology, and Physiological Chemistry. During that period, the second year men studied: Bacteriology, Physiology, Materia Medica, Medicine, Physical Diagnosis, Topographical Anatomy, and Minor Surgery.

Dean P. L. Mull will represent the University of Mississippi School of Medicine at the meeting of the Council on Medical Education and Hospitals of the A. M. A. to be held in Chicago beginning February 13th.

Dr. Rowland Begins 29th Year of Service to the Ole Miss Medical School

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Dr. Peter Whitman Rowland enjoys the distinction of being the only member of the faculty of the University of Mississippi School of Medicine to serve that institution continuously since the establishment of the school in 1903. Since that time he has occupied the chair of Materia Medica and Pharmacology.

This highly respected professor, born of Virginia stock and with an ancestry traced to John Rowland of Surrey England, who came to America in 1635, was educated in the private schools of Memphis, Tenn., and at Oakland Academy. He received his medical degree from the Memphis Hospital Medical College in 1882 and settled in Coffeeville, Miss., where he engaged in the practice of medicine for fifteen years. After the lapse of that period, he removed to Oxford.

In 1887 he took post-graduate work in the hospitals of New York and Philadelphia, attending courses at the New York Polyclinic and doing special work in Physical Diagnosis at Northwestern Dispensary. Several years later he returned to Philadelphia to study certain phases of hospital work in thas city.

Dr. Rowland has long been prominently identified with the medical profession of Mississippi. He served as president of the State Medical Association 1894-95, having previous-

corresponding secretary respectively. He was appointed to the State Board of Health in 1900 by Gov. Longino, and re-elected to that position in 1904 by the Medical Association. He has been a Fellow in the American College of Physicians for many years.

He was university physician from 1907 until 1925, at which time he resigned to devote his entire time to teaching and experimentation. During these eighteen years, in which occurred the epidemics of influenza of 1918 and 1925, he personally treated 550 cases without suffering a single mortality.

Dr. Rowland might well be proud of the fact that he organized the department of Pharmacology at the University of Mississippi Medical School. This department, separate and fully equipped, was one of the first to be organized in the entire country. And, although there is a tendency at many medical schools to place less and less emphasis upon Materia Medica and Pharmacology, these courses are still regarded as being of great importance at the Mississippi Medical School and are treated as such.

Dr. Rowland is the father of Dr. Whitman Rowland, of Memphis, and Herron Rowland, druggist in Oxford.

He is intensely interested in matters of science and has a deep appreciation for art. Chess is one of his favorite diversions and he enjoys an occasional round of golf.

The Birmingham Meeting of Southern Medical Association

Under a Republican or a Democratic president, in good times or bad, rich or poor, a large number of physicians of the South have turned out each November but one for the past twenty-six years to greet one another at the Southern Medical Association's annual meeting. Each year has shown a greater enthusiasm for the coming together and has produced a progressively more scientific array of section and clinic papers, scientific exhibits and discussions. These have indicated the steady increase in population, education, and achievement of this section of the country. This year, despite the uncertainty of the times, 1,241 physicians, 218 women guests and 110 other visitors registered, making a total of 1,569 persons present at the meeting.

The classical address of the President of the Association, Dr. Lewis J. Moorman, "We Owe a Cock to Aesculapius," and the general clinics arranged by him, were of interest to a large group of men. It is difficult to say which of the twenty sections and conjoint meetings was most enjoyed. In attendance they ranged from enthusiastic and intimate small groups to the larger assemblies of several hundred men in the sections, for example, on internal medicine and general surgery. Technical and scientific exhibits were ably prepared and were studied by practically all visitors to the meeting. The premeeting clinics presented by members of the medical profession of Jefferson County (Birmingham) were well received.

Thanks of the Association are due to the General Chairman of local arrangements in Birmingham, Dr. James R. Garber, to the President of the Jefferson County Medical Society, Dr. John D. Sherrill, and to the many local committees which worked with them throughout the year in preparation for a large and happy meeting. Thanks are due as well to the General Chairman of women's activities of the meeting, Mrs. Sid W. Collier, to the Co-chairman, Mrs. S. L. Ledbetter, to the President of the Woman's Auxiliary of the Jefferson county Medical Society, Mrs. John M. Akin, and the many committees of women working with them, for their hospitality to the women guests of the meeting. It is certain that an impression of welcome and of the true old-fashioned antebellum Southern hospitality of which one has read was given to this year's guests of the meeting, both men and women.

NEW OFFICERS

The following officers of the Association were elected for 1933: President, Dr. Irvin Abell, Louisville, Kentucky; First Vice-President, Dr. James R. Garber, Birmingham, Alabama; Second Vice-President, Dr. Hugh J. Morgan, Nashville, Tennessee; Chairman of the Council, Dr. Homer Dupuy, New Orleans, Louisiana; and Chairman of the Board of Trustees, Dr. J. Shelton Horsley, Richmond, Virginia.

The January issue will have a complete roster of all officers for the year.

AWARDS

The medal for scientific research of greatest value by a physician in the South was presented to Dr. Evarts A. Graham, of St. Louis, Missouri, for his outstanding research work, especially on the diagnosis and pathology of inflammatory diseases of the gallbladder and liver. Only four times has this medal been awarded in the life of the Southern Medical Association. The Committee on Scientific Awards which recommended Dr. Graham as recipient of the medal this year consisted of three men who had previously received the same honor for distinguished investigation in medical subjects: Dr. C. C. Bass, New Orleans, Louisiana; Dr. J. Shelton Horsley, Richmond, Virginia; and Dr. Kenneth M. Lynch, Charleston, South Carolina.

Awards among the scientific exhibits were made as follows: first award to Dr. Roy R. Kracke, of Emory University School of Medicine, Atlanta, Georgia, for an exhibit on the experimental production of leucocytosis; second award to Drs. W. C. Langston and Paul L. Day, of the University of Arkansas School of Medicine, Little Rock, Arkansas, for their exhibit on cataract in vitamin G deficiency; and the third to Dr. Seale Harris, Birmingham, Ala-

bama, for a report of clinical studies upon hyperinsulinism.

A loving cup, the personal gift of Dr. James R. Garber, the General Chairman of the Birmingham meeting, was presented to Mr. C. P. Loranz, Secretary-Manager of the Southern Medical Association, as a testimonial of the donor's appreciation of the character and capacity of this faithful officer during his twenty years of service.

The January issue will contain an account of the golf and trap shooting tournaments and the winners of the trophies.

The invitation of the Richmond Academy of Medicine to hold the next annual meeting in Richmond, Virginia, November, 1933, was accepted.—Southern Medical Journal, December Issue.

You will read with interest an account of the 26th annual meeting of the Southern Medical Association. It was a splendid meeting and well attended considering the "times." The meeting breathed the spirit of Harris, Dabney, and Lorenz and this is enough said. They know how to entertain, they know the science in its minutest details, and are adept in the application there of. Headquarters were at the Tutwiler Hotel. For good service and southern hospitality, it is not to be surpassed.

The entire program was unusually good. The arrangement and the execution of same was far above the average. The exhibits were good considering and courageously displayed. A splendid fraternal spirit prevaded the entire meeting. It was quiet and orderly and there was a ring of sincerity in almost every voice.

Due to financial conditions, stenographers for the sections were not used. Each man had his discussion written ahead and the discussions were much better. Men who wished to discuss a paper made his notes as he listened and spoke with much more precision than usual. This saved the association we were told about fifteen hundred dollars, the price of sixty bales of cotton. We advocated and insisted on this plan for our society several years ago. There is no harm in the medical profession economizing especially so when it brings efficiency.

There are many things to be said about the meeting, but the chiefest of attractions was the presence of Dr. Rudolph Matas of New Orleans. He was very reserved as usual, but when urged to his feet he manifested his same keen interest in every medical subject and his discussions indicated that he was informed to the last word in all of its branches. It was indeed a treat to hear his profound words of wisdom. He may not be the most expert in converting medical knowledge into greenback, but in versatility in every subject and in every branch of medicine, surely he is the world's chief. The God of Creation lavished the material for a thousand men when he endowed Dr. Rudolph Matas with his professional mind, his medical soul and his missionary heart. May his fountain of wisdom and knowledge flow many years yet for benefit and the edification of the medical world and for the relief of the human ill.

ADDITIONAL EDITORIALS

The exhibitors at the "Mid-South" are helping very materially to make it possible for us to have the type of meeting we are having. They help to finance the meeting. They talk it. They tell the profession what it is, what it means to them, as their representatives go about. You may learn much from the exhibitors. The book companies and the biological houses et al are working hand in hand with us. We are all one in a great cause. They bring you the latest instruments, the newest books, and the most recently approved machines and biologicals. Be wise. Visit their booths. Tell them that you appreciate their presence and their co-operation.

Everything else being equal it is no harm to trade with the companies who advertise in The Mississippi Doctor. "Scratch the man's back who scratches yours" in no mean policy. We deeply appreciate our advertisers.

Grab your suitcase and take out to the "Mid-South." It is a great treat. You get the last word on all the subjects by the greatest authorities we have. And it is always good to enjoy the hospitality of Memphis. She has the warmest heart and the most cordial hand.

You will read with interest the write up of Dr. P. W. Roland. He is a fine type of the true physician. He is one of the most scholarly men within the bounds of our state. He is a fine teacher. He is courtly and dignified. His scholarship is highly polished. We appreciate his services as an instructor at Ole Miss.

1933 Officers of the North Mississippi 6-County Medical Society

The officers elected for the current year are as follows:

Dr. G. A. Brown, president; Water Valley.

Dr. A. H. Little, secretary; Oxford.

J. J. McGowan, vice-pres., Benton county; Frank Ferrell Delegate to State Association.

C. M. Murry, vice-pres., Tippah county; R. M. Adams, Delegate to State Association.

I. B. Seale, vice-pres., Marshall county; D. R. Moore, Delegate to State Association.

H. N. Mayes, vice-pres., Union county; C. M. Speck, Delegate to State Association.

G. H. Wood, vice-pres., Panola county; G. H. Wood, Delegate to State Association.

W. H. Phillips, vice-pres., Lafayette county; J. C. Culley, Delegate to State Association.

R. J. Criss, vice-pres., Yalobusha county; G. A. Brown, Delegate to State Association.

Biopsy in Mammary Cancer

BY JAMES EWING, M.D.

The evtent and severity of the raperical operation for mammary cancer calls for a positive diagnosis in every case. Since women are now coming earlier for diagnosis of mammary disease, and often before the characteristic clinical symptoms of established cancer have developed, the diagnosis of these conditions has become more difficult and biopsies are more frequently required.

The practice of removing apparently benign nodules from the breast in a doctor's office and waiting two or three days for a report from a distant pathologist often leads to serious situations, and, in the opinion of some surgeons, may imperil the patient's changes for a cure even by a radical operation. The mechanical trauma from such a biopsy may well dislodge cancer cells and cut across and loosen cancerous lymphatics, while the delay of some days gives opportunity for the dislodged cells to reach the distant lymph nodes. The hyperemia of the inflammatory process may also stimulate tumor growth and facilitate the local growth and even the dislodgement of more active tumor cells. There have been some observations which indicate that these undesirable events actually occur and it is reasonable to assume that they do occur. Therefore the conservative surgeon will not remove a tumor nodule from the breast except in a surgical operating room where he is prepared to have an immediate diagnosis made proper operation preformed at the same time.

There is a difference of opinion regarding the best method of performing the operation for a biopsy of the breast. Some surgeons prefer to cut directly into the tumor, make the diagnosis on the gross appearance which is usually specific, or cut out a piece of the tumor for frozen section. If the tumor proves to be cancer, the wound is closed over a sponge soaked in 10% formalin. They then discard the instruments and gloves used in the exploration, prepare the skin anew, and proceed with the operation indicated. This is a very direct and expeditious method. It avoids much trauma inevitable in a local excision which requires cutting on all sides of the tumor nodule. In the case of bulky tumors it may be the best method.

In the case of small tumor I think it is safer to remove the whole tumor, together with a wide area of normal breast tissue, using extreme care not to squeeze or roughly handle the cancerous mass. This procedure avoids cutting into cancerous tissue, and if is done with extreme care not to squeeze the tumor cells should not be disloged.

An experienced surgeon or patholgist should be able to recognize the great majority of malignant tumors of the breast by gross examination of the cut surface of the tumor. Unless he can do this it is obvious that the tissue

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chosen for microsopic section may not contain the malignant tumor. Therefore great importance attaches to the gross diagnosis, which should be relied upon wherever possible. The extent of the disease also can be told only by gross examination. The cicatricial character, resistance, opacity or translucency, and the chalky streaks of carcinoma are generally specific. Frozen section is therefore often unnecessary but should be made in all cases which are in any respect doubtful to the particular surgeon or pathologist concerned. This diagnosis should be made at the operation and the appropriate procedure carried out immediately.

There are some lesions in the breast in which it is difficult for any surgeon or pathologist to state positively whether the condition is malignant or benign. Hence the surgeon must not assume that by obtaining a microsopic diagnosis he has secured positive information. In such cases the clinical data, age of patient, extent and duration of the disease, condition of lymph nodes, and especially the gross characters of the lesion should be given much importance in the decision. Under these circumstances some surgeons would err on the side of caution and perform the radical operation. I believe it is unfair to the patient to perform a radical mastectomy unless the diagnosis of carcinoma is positive. There are many precancerous and suspicious lesions in the breast which are clinically benign, while a true carcinoma is nearly always obvious to a pathologist of adequate experience. When a substantial doubt exists about the nature of a microscopic section of a breast tumor, it is generally not cancer.

Program of North Mississippi Medical Society

Held at Water Valley, Miss., Dec. 14, 1932

Invocation.

1. "Immediate and Ultimate Prognosis of Certain Types of Cardio-Vascular Disease" by Dr. Whitman Rowland, Memphis. Discussion opened by Drs. S. L. Cox and J. S. Donaldson.

2. "Umbilical Hemorrhage" by Dr. R. G. Grant, Holly Springs. Discussion opened by Drs. C. M. Murry and and R. J. Criss.

3. "Duodenal Ulcer" (with motion pictures) by Dr. C. M. Speck, New Albany. Discussion opened by Drs. E. S. Bramlett and H. N. Mayes.

4. Case Reports, (Society members are urged to present briefly any cases that might be of interest to the society).

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THE MISSISSIPPI DOCTOR

VOL. 10. BOONEVILLE, MISSISSIPPI, MARCH, 1933 NO. 10

Pressing forward for The Mississippi Doctor, the journal with a message, the journal with a mission.

THE HAPPY DOCTOR

Who is the happy Doctor—Who is He
That other medical men should wish to be?
—It is the sincere soul—who guards his trust
With sacred vigilance: To all men just:
Though learned, yet unsatisfied with love;
He daily yearns, and seeks for knowledge more,
And though his skill is famous, gloats he not:
Nor grudgingly imparts, but to a jot,
Unselfishly, he yields his scheme or plan
To men of his profession—for sake of man!
Nor does the moral being of himself neglect
But in his daily life, his deeds reflect
"A constant influence"—a single aim:
Unhampered by wild fancies, or by fame;
Finally, all human ills to tame.
This is the happy Doctor—This is He
That other medical men should wish to be.

—MRS. J. W. PRICE.

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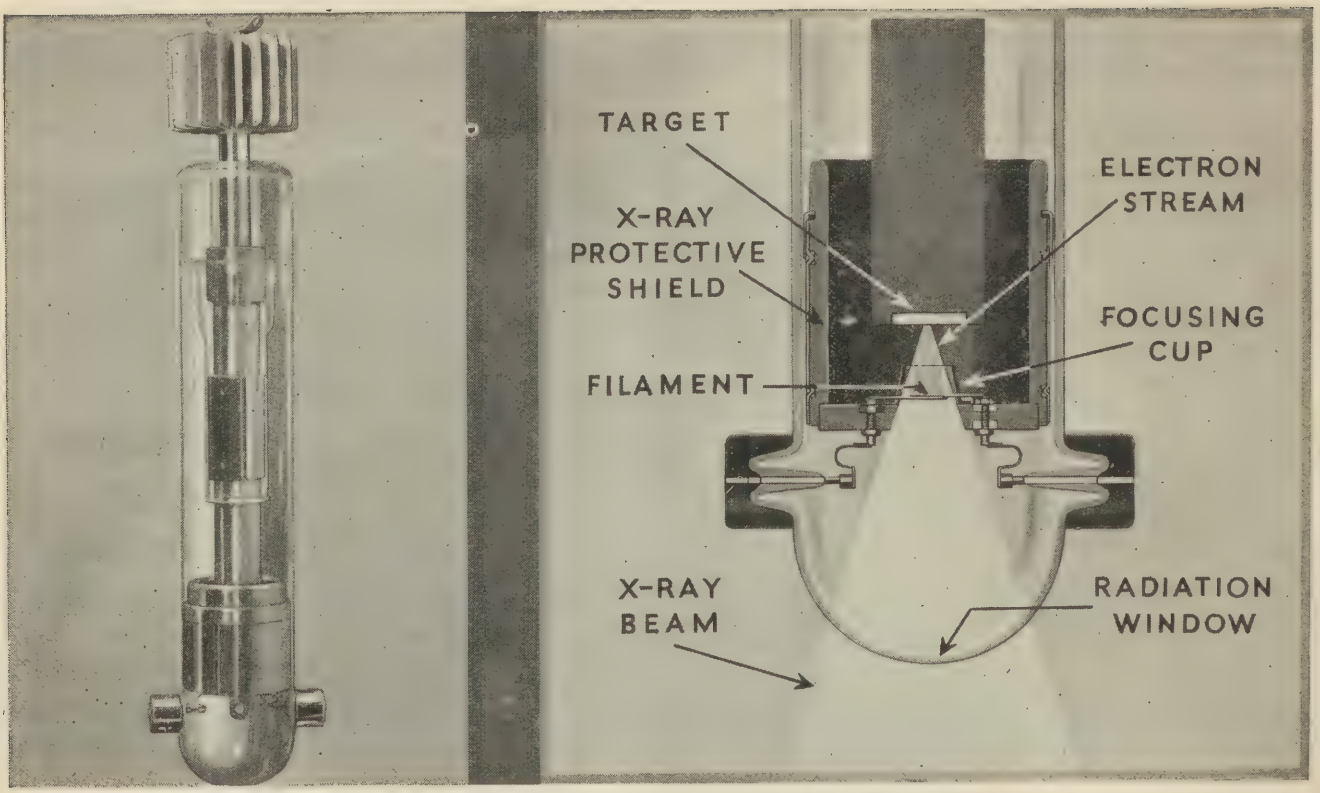
Dr. A. B. Dancy of Jackson, Tennessee, the now fullfledged, active and able president of the Mid-South Post Grduate Medical Assembly. He will carry the banner forward, he will carry it high and gracefully. Friend neighbor, Dancy, we are with you and for you.

Here is a likeness of our own efficient secretary, Dr. J. M. Acker, Jr., of Aberdeen. Dr. Acker is also president of the Mississippi State Medical Association. He is actively doing honor to this most honored position. For Southern culture and refinement Aberdeen, we are sure, is not surpassed in our state. Dr. Acker is of and has become a liberal part of same. He is immaculate in appearance, magnetic in personality, and like Franklin D., a man of few words, but wise decisions. He speaks to the point and covers the subject. He is a modern cut of the "general man" who can do well or better nine tenths of the large practice that comes to him. The state association is going forward under his leadership as has the North East Mississippi 13-County Medical Society.



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MID-SOUTH POST GRADUATE MEDICAL ASSEMBLY

W. H. ANDERSON, M.D., Editor and Manager
MRS. W. H. ANDERSON, Assistant Editor

Entered as second-class matter, January 18, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

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President McDaniels presided over the Mid-South Post Graduate Medical Assembly with grace, ease and efficiency.

In making up your diagnosis nowadays, you had better consider the new disease, "depression psychosis."

It is not enough to "know your pills," you need to know the individual to whom you give them in all his relations to life.

So it would appear that Tuberculosis is three times more fatal to the negro as to the white and nine times to the Indian.

We hope you like our issue this month. You will be delighted with the papers of Drs. Brown, Harris and McDaniels, we are sure.

The forgotten man in the profession is the general practitioner, but although rejected he will again become the corner stone in the modern structure of preventive medicine.

A philosopher said, "never put off until tomorrow what you can do to day," but medical science is saying to you, "never have any disease today that you can put off until tomorrow.

The Mississippi Doctor is the official organ of the Mid-South Post Graduate Medical Assembly. You will want the splendid papers that it is to carry this year. It may be had for one dollar, for one year.

You will read the very beautiful tribute to Dr. Kirk in the Amory News. It was written by Dr. Bryan. Every word was deservingly and well said. We keenly regret the loss of this one of our number. The Mississippi Doctor offers its sincerest sympathy to the bereaved ones.

Dr. G. S. Bryan reports that he attended the last rites of Dr. J. W. Young of Grenada on Feb. 14th. We did not know Dr. Young personally, but from what we have been told he was one of our finest types of the old school, one of the patriarchs in general practice, the family physician. His type has not lived in vain. We need the quality of heart, mind, and soul in the profession always.

Dr. Peter W. Rowland, of Oxford, a charter member of the Tri-States Medical was unanimously elected president-elect of the Mid-South Post Graduate Medical Assembly at its last meeting. In so doing it most honorably bestowed its highest honor upon one of its most honored members. Dr. Rowland has been an instructor at Ole Miss for many years. He is scholarly, he keeps up with the best. He is dignified and polished, he is a corner stone in medical ethics. We feel proud of our president-elect.

Secretary Acker informs us that we have a fine program in the making for our meeting on March 21st at Macon. Dr. E. Lawrence Scott of Birmingham is to be the visiting orator. His subject is Infantile Paralysis. Lilly, McRae, and Rayburn are also on the program. The meeting will begin at two o'clock. No banquet is to be had. And by the way, may we

suggest that for this year we do not plan a banquet at any place. We have some towns that we would like to visit, but which would be burdened somewhat to furnish entertainment. We are just thinking that it might be well to yield this much more to the depression for this year. Let us all meet at Macon March 21st at 2 o'clock.

If you have not paid your local dues, do your dead level best to do so. Some way, some how you must pay your dues. It is a little debt that you owe to organized medicine. It should be as urgent as your grocery bill. You need the mental food that it brings to you. You need it as badly as you do meat and bread. You clientele needs you to have it. If you can understand what your local society means to you, then paying the dues will be easy. "The work we love to do physics pain," the bills we want to pay worst are the ones we pay the easiest. Our society is sick for the want of dues. Pay your dues as you would give aid to a sick mother. If you are to have a long and a successful professional life you must honor yourself and your society with the regular payment of your dues.

The two year medical course at Ole Miss should be continued. It can stand the test with its former graduates. It has the medical spirit. It teaches the student what he needs to know to practice successfully. Stone buildings and marble floors do not make a medical school. It's the men, it's the teachers, it's the spirit and just enough equipment to do the work. All important things can be done with comparatively simple equipment. The doctor of today needs to be taught how to do with less. The doctor should learn the economy side in the practice. We are also depending too much on the mill methods of diagnosis. Some schools are teaching the students into helplessness. The Ole Miss Medical School must live and go forward.

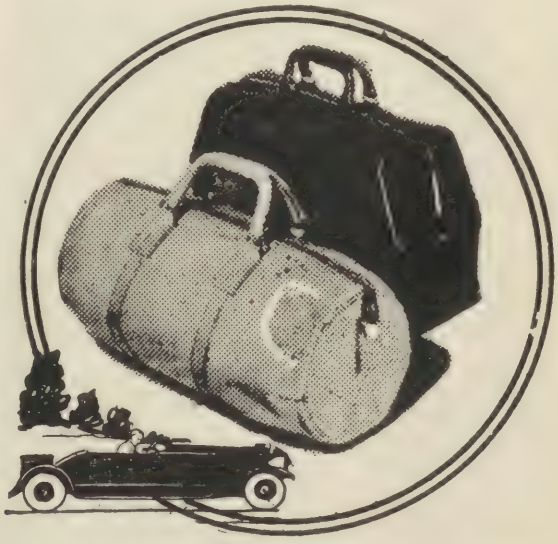
The Mississippi Doctor is now the official organ of the Mid-South Post Graduate Medical Assembly. During its entire life it has been a booster for this association. As the official organ now of the Northeast Mississippi 13-County, the North Mississippi and the Mid-South, and with the special papers that it will publish from time to time it hopes to give its readers the best of service. From its pages you will get the views from the ranks in the profession out on the firing lines and you will get the last word from the ablest authorities in the United States. The Misssissippi Doctor has been the active promoter of the community hospital. Its society territory has a greater number for the number of counties perhaps than any other section in this country. This journal discusses our medical problems from time to time. It is glad for you to join in the discussions from time to time. Our depression price for this year is one dollar only. Let us know if you want the journal. You can ill afford to miss the papers that are coming out.

The challenge to the profession is to deliver modern medicine to the masses at a cost at which it may be utilized. Opinions are varied as to how this is to be done. Some think state medicine will come and will do it. Others think medical insurance will be the answer. Regardless of who says what the community hospital is the best answer so far. The community hospital carries palliative, curative and preventive medicine to the civil firing lines of rural life. The small hospital, will develop a little medical center in each community. Through its aid the general surgeon and the general practitioner can make more money with less charge to the individual. The community hospital will lead the profession from the over-crowded cities and give us a equitable distribution. It will save the patient half the bill in travel to the city. It will raise the batting average of the general men of the profession. It will meet the demands of the machine age for service out at the cross roads. It will help the flow of population back to the country that is needed at the time. The community hospital will develop into a postgraduate teaching center. It will develop each community to take care of its own medical and health problems. It will be a big boon in teaching preventive medicine and preventive surgery. The small hospital and the well ordered clinic with a little funds for charity from the national, state and municipal governments and from church and philanthropy will bring modern medicine out to the commercial firing lines at less cost to the masses and with more profit to the general practitioner.

The Mid-South Post-Graduate Medical Assembly was a great success this year considering the "time". The registration reached nine hundred and eight nine. The entertainment was very fine. The program was extra good and up to the standard. The Mid-South is in a class to itself. It covers the field of medicine and surgery in a post graduate course by the best authorities in the United States. It has a broadening influence. All come together in one assembly room. The essayist is given one hour and he covers his subject. At the luncheons any one may ask any question and have it answered or discussed. We do not know of any other assocition that offers so much by the auhtorities in such a short time, and for so little expense. The regular meeting place at the Peabody Hotel is wonderfully convenient. This hotel is second to none in service and in arrangement. It has a cordial atmosphere. It furnished good food and, the prices are reasonable. It is well arranaged for the exhibitors, They have been a big factor in making the association what it is. In fact the exhibitors make up a good part of the meeting. They are and should be considered a part of the assembly. We like to see the latest in equipment and in biologicals. The city of Memphis has a fine medical atmosphere. It has able surgeons, practitioners, and specialists. They have a glad hand that is worth your while going to Memphis to shake. Memphis is made up of a people who are friendly, cordial, and cultured. Memphis has a fine medical school. It is most fortunate for the medical profession of the Mid-South that we have such a wonderful opportunity to keep posted as is offered at this Post-Graduate Assembly. And last we want to offer our cordial congratulations to and express our appreciation of the splendid program committee and the efficient secretary, Dr. Cooper.

The old family physicnial, poor in equipment, but rich in mind, heart, and soul, the medical, social, and religious advisors of the entire community.

Dr. Golpher, the super-concentrated specialist, well grounded in sports and society and some of the ailments affecting some small part of the human anatomy. He believes his success is measured by the size of the fees he is able to extract.



The broadly educated, cultured, refined, and professionally trained general practitioner and general surgeon, "one man," with his car, kit, and clinic and hospital around the corner who is now well equipped in every way to take care of nine tenths of the cases he sees. He sprung from the old family physician. He is now the specially trained general practitioner and has, or will become the corner stone of the medical profession.

The Medical and Surgical Treatment of Gall Bladder Disease

BY THOMAS R. BROWN, M.D.
Balitmore, Md.

It is very interesting to think how completely our attitude toward the gall bladder has changed during the past twenty years—twenty years in which I have devoted the major portion of my time to the study of digestive problems and have therefore had an opportunity to study this question at close range. Two decades ago diseases of the gall bladder were supposed to be relatively rare—quite a few cases of gallstone colic, a very few of empyema and hydrops, occasionally neoplasm, almost comprised the story—though the surgeons now tell us that a large proportion, certainly over one-half of the gall bladders in people of middle or later life, are diseased to a greater or lesser extent.

Moynihan has taught us of the enormous role it plays in cases which before that time were diagnosed as purely functional dyspepsias; Lyon has given us a method, which, while by no means as valuable a diagnostic aid as many have thought, nevertheless is a real aid in recognized certain cases of infection of the biliary tract; Graham has furnished us with a radiographic procedure which has enormously widened our diagnostic field; while the clinician, spurred on by these contributions from the fields of surgery, laboratory technic and radiology, has restudied the problem and has now a far better knowledge of the clinical picture presented by the diseased gall bladder with a corresponding improvement in treatment, be it medical or surgical.

There are still many gaps in our knowledge; there are still many fundamental problems in etiology that have not been solved; diagnosis cannot always be made either as to whether there is gall bladder disease or not, or if there is disease, its exact nature or intensity; but enough has been done for us to be able to broadly evaluate the diagnostic criteria, the nature of the various forms of therapy and the probable results of that therapy.

It is a consideration of these principles as to etiology, diagnosis and therapy based on this newer knowledge and a rather extensive experience in this field that is the reason for this paper, that is: How to answer the questions—

First: Has the patient gall bladder trouble, and if so, what is its nature and severity?

And second: With gall bladder disease certain or probable, what is the proper treatmnet?

In the first place we must entirely change our attitude toward the gall bladder. We cannot regard it as a definite entity such as the heart or the kidney or the eye. It must be considered as part of a system—Liver, extra hepatic and intra hepatic biliary ducts, gall bladder itself—because when gall bladder disease is present there is usually a greater or lesser concomitant and associated pathology in the rest of this system. Thus the result of our therapy, notably our surgical therapy, will be largely dependent upon whether this associated involvement of liver and biliary system is great or small; whether the major

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portion of the pathology will have been removed by the attack on the gall bladder; whether the compensatory dilatation of the biliary ducts and radicles following cholecystectomy will take care of the associated hepatitis or cholangeitis; or whether in reality it is liver and biliary tract that play the larger role in the syndrome presented and that represent the primary trouble, and the gall bladder is playing only a minor and secondary role.

For this viewpoint, this consideration of liver and entire biliary system rather than gall bladder alone, we have sound embryological, anatomical and physiological, as well as clinical, justification.

The liver and gall bladder are developed together from the first evagination or bud that springs from the gut; the solid cephalic portion of this bud giving rise to the liver—the hollow caudal part continuous with the lumen of the gut giving rise to the extra hepatic ducts, with the distal portion enlarging to form the gall gladder. Thus the embryological evidence of their homegeneity!

The gall bladder, although in the main covered by peritoneum, is connected with the liver in a portion of its superior surface by areolar tissue containing lymphatics and blood vessels through which, obviously, infection may flow in either direction. This, with similarity in blood and nerve supply, the anatomical basis. Occasionally, of course, the gall bladder is entirely covered by peritoneum, is not directly connected with the liver, but is dependent from it by pure peritoneal attachment which may very occasionally become elongated to such an extent that the gall bladder may be situated in the lower right quadrant of the abdomen and produce a tumor very difficult or impossible to diagnose. I saw such a case last year which, incidentally, was only correctly diagnosed at operation. The proximity of the gall bladder to liver, to transverse colon, duodenum and pylorus, is the obvious cause of the confusing symptoms so often presented, especially as it may vary somewhat in position, may even be to the left of the median line and may show certain anatomical abnormalities such as congenital communication between hepatic and cystic ducts or separate openings of hepatic and common ducts into the duodenum; and extremely rarely there may be a double gall bladder. Another factor of extreme interest in the consideration of the association of diseases and the confusing over-lapping of symptoms in biliary tract disease, is the position of biliary and pancreatic ducts, incidentally very closely connected anatomically in their fusion in the duodenal wall, in about 96% just before the papilla of Vater, though in about 4% of the cases fusion is seven centimeters higher, which by some has been supposed to be the cause of pancreatic lesions, notably an acute pancreatitis secondary to gall bladder disease.

Physiologically, of course, liver, biliary tract and gall bladder must be considered together. It will take us too far afield to go into the complex subject of liver physiology, but in one of its many functions, the formation of bile, the role of the gall bladder is now fairly well understood. The work of Rous on dogs has shown that its major function, at least, is the concentration of the bile. The fact that he showed a variation in concentration power in normal

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animals from three to eleven times (possibly partly based upon anatomical variations) must make one a bit skeptical as to the diagnostic value of faint gall bladder shadows after dye administration as evidence of pathology. May not some of these be simply variations in concentrating power?

As to the motor mechanism of the gall bladder, there is still much difference of opinion. Although many do not believe it, the weight of evidence seems in favor of a true sphincter, the sphincter of Oddi. On the other hand, the weight of evidence seems to be against the view that muscular contractions of the gall bladder wall play a significant role in its emptying, the absence of such a mechanism having been recently shown very beautifully by Marrazzi, who studied the gall bladder by direct observation through an endoscope and who showed definitely that neither under ordinary physiological influences nor after the use of drugs that have a definite effect on smooth muscle elsewhere, nor by mechanical or electrical stimulation could such contraction be demonstrated.

As to the role played by the gall bladder in the formation of cholesterin, here again we meet widely divergent views. The evidence, however, seems to be most in favor of the view that the gall bladder absorbs cholesterin as supported by Aschoff rather than that there is any secretion of cholesterin by the wall itself. In fact, there is increasing evidence that the intake of lipids by mouth plays little or no role in cholesterin metabolism. There is, therefore, little evidence in favor of excluding oils, eggs, cream and other fats from the diet of those with cholelithiasis except, obviously, in cases which are associated with jaundice where the reason of course for such exclusion from the diet is the well known deficient digestion of fats in the absence of bile in the intestine.

ETIOLOGY

In regard to the etiology of biliary tract disease, something is known, a great deal is still unknown. There seems to be evidence that overeating, a sedentary life, lack of exercise and obesity all in a way predispose to it. There is a fairly general belief that pregnancy and the puerperium play a role; that many cases date their first definite symptoms—severe pain, jaundice, upper right quadrant discomfort—from the last days of pregnancy and the first days of the puerperium, the attacks often forgotten in the lapse of time and only elicited by careful history that is so essential in the unraveling of all abdominal cases.

On the other hand, some observers are quite convinced that gall bladder pathology is relatively not more frequent in women that have borne children than in those who have not, although personally, I can hardly escape from the belief that in some cases there is definite connection, possibly due to inactivity, possibly to pressure, possibly to disturbed blood chemistry, or possibly to infection.

Preceding infections, notably typhoid fever, unquestionably play a role in some cases. The typhoid bacilli presumably pass from the intestine by way of the mesenteric glands, Lympahtics, and thoracic duct into the general circulation, and in their excretion by the bile may be so concentrated in the gall bladder as to produce temporary or permanent pathology—cholecystitis or cholelithiasis. This, however, occurs far less frequently than was formerly supposed; in our experience not more than 5 per cent of the cases of cholelithiasis seem to be of this orgin, but certain of these cases living typhoid bacilli may still be obtained in the bile and from the center of the stone, although the infection had occured many years ago. It is this type of case, as well as the so much commoner similar urinary tract typhoid infections, that is such a menace as a carrier. Other infections, notably influenza, may play a similar role, through the path of infection may be somewhat different.

Cardiac disease unquestionably predisposes to cholelithiasis, probably due to the inevitable inactivity of the patient, the passive congestion of the liver, the disturbance of digestive function with its usual absence of gastric acid and the corresponding increase in the gastric and duodenal bacterial flora. Thus in the royal infirmary at Manchester, gallstones were present in 10.4 per cent of 504 cases with cardiac pathology and in only 5.1 per cent of cases with no such pathology. On the other hand, the reverse is equally true—that definite myocardial changes may be referable to biliary tract disease with its pain, its fever, its jaundice, its excess of bile salts, pigments and possibly other toxins in the blood.

Cholesterin stones, the so-called metabolic stones, may possibly be due to excessive cholesterin in the blood, but it is far more likely they are due to certain changes in the bile lessening the solubility of this substance of lowering the absorptive power of the gall bladder wall.

There are many precancerous lesions in the digestive tract—leukoplakia, peptic ulcer, intestinal polyps—but none more interesting than the role of cholelithiasis in the origin of gall bladder cancer, 70 percent of those dying with this disease having gallstones as well.

Cirrhosis of the liver certainly predisposes to biliary tract and gall bladder disease; probably by direct infection, possibly by disturbances in bile formation; while the role of the liver in cholelithiasis is well shown by the not infrequent association of hepatic and gall bladder lithiasis and the development of stones in the hepatic biliary system after cholecystectomy.

On the other hand, the vast majority of diseases of the biliary tract cannot be explained by any of these factors; they must have their origin in an infection from the gastro-intestinal tract, but whether the lower portion of this tract—the colon, the appendix, the terminal ileum—or the duodenum plays the larger primary role, is still a moot question.

In regard to the duodenum, it is worth remembering that while under normal conditions stomach and duodenum are practically sterile, in any condition which leads to gastric or duodenal inflammation, especially, as is the case of most, with a temporary or permanent absence or diminution of hydrochloric acid in the gastric contents, the duodenum is filled with all forms of intestinal micro-organisms, notably the colon bacilli, (although of course streptococci are also met with as they are markedly prevalent in the ileum under normal conditions and in smaller proportion in the colon.) It is highly probable that this group of organisms is in the majority of cases

the cause of infection of gall bladder, liver and biliary tract, acute and chronic cholecystitis, empyema, gangrene and suppuration. It is amazing how rapidly colon bacilli may appear in the duodenum in such conditions, as for instance following an acute gastritis which is usually associated with a temporary achlorhydria.

The path of infection of this organism from intestinal tract to biliary system is still a moot question. It is certainly not proven that its path is similar to that of the typhoid bacillus, that is, through mesenteric glands, lymphatics, thoracic duct and general circulation. It is possible that this path is the portal system, but there is very little experimental evidence for this. It might be through the lymphatics directly to liver, producing first a liver infection and thence by the lymphatic system between liver and gall bladder into the gall bladder as a secondary infection, as Graham and many others believe; although many others think the reverse is more probable, that is, the gall bladder is primarily, the liver secondarily, infected. It may represent an ascending or retrograde infection from the diseased duodenum and this view is held by a number of investigators, the lesion in this case being first superficial and relatively easy to cure, later invading the gall bladder wall and obviously much more resistant to treatment.

The frequent association of duodenitis and gastric disturbances with gall bladder pathology, speaks in favor of the latter of these views, while perhaps the even more frequent association of gall bladder disease and appendicitis is more in favor of a direct lymphatic infection from the lower intestine. There is quite a little experimental evidence in favor of this but perhaps not more than experimental evidence in favor of other views.

Some still believe with Rosenow that many cases of biliary tract disease are due to special strains of streptococci coming from periapical abscesses and diseased tonsils or accessory sinuses directly through the blood stream, that is, by the cystic artery; but while it is possible that this may play a role in some of the severer cases where virulent streptococci are found in the throat and also in the gall bladder, it is highly improbable that it plays a large role in chronic infections. Many observers have not been able to confirm Rosenow's work and according to some of these not more than 7% of the organisms found in the diseased gall bladder are streptococci, the vast majority being colon bacilli.

Finally, one must not forget the possibility that anatomic abnormalities—kinking of the ducts, abnormal position of the gall bladder and a physiologic variation in the concentrating power of this viscus —may play a contributory role.

SYMPTOMATOLOGY

The symptoms in gall bladder disease may be definite, localized, and crystal clear; or they may be diffuse, referred elsewhere, blurred and indefinite. No cases are easier to diagnose than the former, none more difficult than the latter.

Nothing could be more clear cut than the typical gallstone colic with or without jaundice; the localized, agonizing pain requiring morphine, the tenderness, the nausea, the epigastric distention, often a white stool and dark urine give a picture almost impossible to mistake. Yet we have all had cases where with such a history gallstones have not been found, but either cholecystitis alone (and of course in this event there may have been a single stone which had been passed) or no evident disease there but a renal calculus or pyelitis or spastic colon with mucous colitis, a diseased appendix, a duodenal ulcer, evidence of upper right quadrant adhesions or absolutely no evidence whatsoever of any pathology where the symptoms were presumably due to coronary disease, non demonstrable arthritis of the spine, a localized neuritis, a gastric crisis of a locomotor ataxia, or simply a localized manifestation of hysteria or psychoneurosis.

Again, it is hard to mistake an acute cholecystitis with its local tenderness, often exquisite, its fever, its nausea, possibly its slight jaundice, its leucocytosis, and often its palpable tumor. And yet again, it is extremely difficult to eliminate certain rare other possibilities and in certain cases to differentiate a mild infection which will clear up spontaneously from a severe suppurative or gangrenous process. In the latter case in most instances, the infection will be kept from becoming a general peritonitis by the enfolding arms of the ever-protective omentum, one of whose main functions is the localizing of infection. Yet, in certain cases, this mechanism may not be effective and immediate surgery may be necessary to save life. It is for this reason that an ever increasing number of surgeons believe that the acute gall bladder should be treated exactly as the acute appendix; that is, by immediate surgery; although many still believe that in the vast majority of cases it is wiser to wait for the infection to quiet down with subsequent interval operation if necessary. Unquestionably in many cases the severity of the infection can be determined by careful clinical observation, the study of temperature chart, the frequent estimation of total and differential leucocyte count, the presence or absence of sweats, the variations in the pulse, the general condition of the patient, the evidence of toxemia; but there are certainly some cases in which suppuration or gangrene may develop with no local, general or laboratory findings that would arouse any suspicion as to its possibility.

Mentzer, in his recent very careful review of all the gall bladder operations in the San Francisco Hospital from 1919 to 1931, is convinced that . . . "advanced acute cholecystitis cannot be recognized in many instances even by the ablest physicians; that what appears to be a mild or moderately severe cholecystitic inflammation clinically may actually be fulminant and that perforation and gangrene of the gall bladder occur more frequently than is usually suppose."

I have recently seen several such cases and personally believe that for some reason there has been a definite increase of these fulminating cases in the past few years. In two of my cases it seemed to follow immediately after an attack of grippe with bronchial pneumonia, but whether this was the real cause one cannot say.

Thus, while in gallstone colic and in many cases of infected gall bladders the symptoms are fairly definite and the diagnosis easy, nothing is more difficult than the diagnosis of disease of the biliary tract

in that large group of chronic, and small group of acute, cases, where there are few or indefinite local symptoms, and almost entirely symptoms referred elsewhere. The reason for this referring or overlapping of symptoms is easily understood when we think of the close juxtaposition of liver and gall gladder, heart, lungs, stomach, duodenum and transverse colon, when we remember the great similarity in blood and nerve supply of these viscera and realize with Charles Mayo . . . "How diverse may be the paths through which painful sensations may leave the abdomen." (Many, however, still believe it is a viscero-sensory reflex and not the presence of true nerve fibres that explains such phenomena.)

A pain in the right shoulder or a persistent backache usually in the right side may be the only evidence of biliary tract disease—the former probably due to the fact that a branch of the phrenic nerve unites with the sympathetic fibres of the celiac plexus to form the phrenic plexus. The picture may absolutely stimulate duodenal ulcer—hunger pain, periodicity, persistent defect in the X-ray plate, even extensive hemorrhage—and yet a normal duodenum but a diseased gall gladder be found at operation; while the reverse is also true, that is an ulcer in the second portion of the duodenum presenting only a typical gall bladder syndrome. In trying to determine the cause of extensive hemorrhage, one should never forget the possible role that an unsuspected gall bladder may play, probably due to an associated marked engorgement of the veins in stomach or duodenum; while it is wise to remember that even a diseased appendix may also be associated with severe hemorrhage. It is, however, well to remember that the association of ulcer or appendicitis and gall bladder disease is not at all uncommon.

A diseased gall bladder with its achlorhydria, the anorexia and loss of weight met with in certain of these cases with a persistent filling defect in the stomach, which may be due to adhesions between gall bladder and pylorus. may so completely simulate gastric carcinoma that only at operation the mistake is discovered.

In a few. fortunately a very few, cases the symptoms may be entirely cardiac—usually simulating coronary disease, occasionally myocardial weakness—but where there is no such disease but only a group of symptoms reflexly produced from a disease gall bladder. We have recently reported a group of such cases where all the cardiac symptoms disappeared after cholecystectomy, but we must never forget that the reverse of the picture—that is, coronary disease with exclusively abdominal symptoms usually suggesting gallstone colic—are far more common. One must therefore be very sure and very careful before diagnosing a cardiac syndrome as biliary in origin and advising cholecystectomy as its treatment.

These are the **uncommon** referred symptoms of gall bladder disease. Much more commonly of course the symptoms are referred to the stomach. It is certainly true that a large number of the flatulent dyspepsias met with mostly in women, but occasionally in men, of middle life, with discomfort and distention after meals, marked discomfort during the night, fulness, eructation, palpitation, and sometimes slight nausea, are due to an unrecognized gall bladder disease with or without stones. The discomfort sometimes radiates to the ball bladder region, there is sometimes local tenderness on deep pressnre, but often there is no suggestion of any gall bladder pathology and this gastric syndrome may be the only evidence of cholelithiasis or cholecystitis. Sometimes on close questioning the history of an acute attack may be elicited; more often there has been no definite biliary tract history. It is sufficiently common to be dignified by the name of biliary dyspepsia; it should always be suspected as a potential cause of atonic flatulent dyspepsia, especially if the symptoms are much more marked at night.

In certain cases of diabetes gall bladder pathology is found without antecedent history and in certain cases with definite history of previous attacks. It is unquestionably true that biliary tract pathology, recognized or unrecognized, is present in a certain percentage of cases, varying from the 1% of Nauyn to the 41% of Eustis. Sometimes slight persistent of periodic fever may be the only sign, while there is still a considerable group of physicians notably Wilkie who believe that a diseased gall bladder is a very potential factor as a focus of infection in various widely different conditions — arthritis, nephritis, myocarditis and other chronic inflammatory processes.

I, personally, have seen very few cases in which such a relationship can be definitely proven. I have many times been extremely disappointed in the absence of any benefit after cholecystectomy and I am extremely skeptical as to the advisability of gall bladder removal as a proper treatment in such cases. I hardly remember a case that has been very materially helped thereby. (On the other hand, it is perfectly true that fever, toxemia or jaundice of a long lasting biliary tract infection may possibly be the cause of trouble elsewhere and it seems quite definitely proven that myocardial disease can be produced by this mechanism.)

It is a disturbing organ, this gall bladder, with its localized symptoms in one case, its referred symptoms in another, its mimicry of disease elsewhere and its ability to mirror disease in other organs. To make the maximum number of correct diagnoses and to minimize failures, all the possibilities that we have briefly sketched above must be carefully considered and weighed, for it is by this knowledge, combined with the proper examination and the appropriate laboratory studies, that we must hope to reach the correct diagnosis.

DIAGNOSIS

How then may we best arrive at a correct or at least a probable diagnosis? In my experience the very best information comes from an old fashioned procedure, far too often forgotten in the passion for short cuts to knowledge by laboratory or objective methods—the history of the case! I have found that notwithstanding the notable advances made in X-ray diagnosis, in the study of duodenal contents, and in other technical methods which are always increasing our already very large debt to the Roentgenologist, the research worker and the technician, it is from a carefully taken, thorough and well digested history of the case, the noting of the mode of onset, the early symptoms, the change of symptoms, the picture as it progresses and the various factors that modify it,

from which we can obtain the most reliable diagnostic data.

The history, sometimes almost forgotten, of a severe attack or attacks of right epigastric or hypochondriac pain requiring morphia hypodermically for its relief, the story of attacks with jaundice and slight rise in temperature, of acholic stool and cholic urine, of persistent or remittent pain or tenderness in the upper right quadrant, or of nocturnal flatulent gastric dyspepsia,—it is from these we often make our final diagnosis and plan our treatment, never forgetting, however, in the wise words of Professor Haldane that in studying biological phenomena. . . "We must always keep the whole organism in view." It is of singular importance in this field where the symptoms are so often difficult to interpret.

In a careful analysis of the large amount of material in our Clinic two years ago, we found that by such a method alone, that is, careful analysis of the history, not only digestive history but the entire history of the patient with the usual routine physical examination, slightly less than 85% correct diagnoses were made in cases of biliary tract disease as judged by the subsequent history of the cases—usually surgical.

Next in value, of course, is cholecystography by the Graham method. But our experience has been that by this method alone the chance of error is a little greater than by the preceding method alone, if judged by the same criteria. In our series we have found both a positive and negative error of about 20%; in other words about 20% of the cases diagnosed as pathological were found to be normal and about 20% of those diagnosed as normal were found to be pathological. We, however, have used practically exclusively the oral method and the margin of error is certainly somewhat greater by this than after the intravenous administration of the dye. It is needless to say that in all suspected cases one should never be satisfied with one series of plates alone. But as we have already mentioned, variation in the concentrating power of the gall bladder and of the absorptive power of the intestinal mucosa and probably anatomical variations as well in the normal gall bladder, must per se produce variations in density of shadow that are likely to be regarded as pathological, but that may in reality be within normal limits.

In the case of the diagnosis of gallstones by cholecystography, the possibility of error is of course very much greater, some saying that as many as 50% of subsequently demonstrable gallstones have not been visualized in the X-ray pictures.

As to the value of the so-called medical drainage of the gall bladder (method of Lyon) as a diagnostic procedure, there is the widest divergence of opinion. Some place the utmost confidence in it, others deny its value altogether. Personally I do not use it as a routine measure mainly because with the tendency to subacidity and achlorhydria so common in biliary tract disease, the normal sterile duodenum teems with all kinds of bacteria and therefore bacteriological studies seem to me of little or no value except in those rare instances where very unusual micro-organisms or some form of protozoa, such as Lamblia, are found in large amounts; the presence of a few pus cells cannot be of much significance because of their possible origin from pharynx, stomach or duodenum, while, in our experience at least, the presence of cholesterin or bilirubin calcium crystals is not diagnostic of gallstones and are frequently found when no such pathology is present.

On the other hand, I have found it of great value in certain cases, mostly those of extensive associated hepatitis and biliary tract infection. It is useful in this group of cases both before and after cholecystectomy, especially in the latter instance and in this case it often tells one what nothing else can. These cases are relatively rare, but they are very important for if we can realize the extensive involvement of the entire biliary tract before operative procedure has been considered, we may either decide to postpone operation longer, or, instead of the usual cholecystectomy, to advise cholecystostomy with its long period of drainage or cholecystgastrostomy.

These, with the physical examination and the ordinary laboratory procedures, study of blood and urine, etc., are our main means of diagnosis. But there are other methods which sometimes help,—the study of local areas of hyperasthesia, frontal or dorsal pain points, the estimation of pancreatic ferments in the duodenal contents to see if we can get evidence of any associated pancreatitis, the estimation of bile acids in drainage material, some having suggested they are diminished in calculus cholecystitis but not in inflammation without stone. Possibly of much greater use are functional liver tests, for as Graham, McComb, Jackson and others have preached, every cholecystitis with or without stone is associated with inflammation of the liver—mild, moderate or severe. In the latter cases at least this may be far more the cause of symptoms than the gall bladder itself.

In regard to tests of liver function, many tests have been suggested for the liver is very protein in its activities, bile forming, glycogenic, antitoxic, in addition to the role it plays in fat and protein metabolism. To really visualize the liver's condition, theoretically at least, tests based on each of these functions should be utilized.

Unfortunately, few of these tests are really satisfactory, few are very accurate; but of the most used tests, each of them may help us a little in certain cases. In our experience, however, in most instances this is often very little, though the galactose test is probably of more value than the van den Bergh, icteric index, bromsulphalein, urobilinogen or estimation of dye retention after cholecystography by the Graham intravenous method.

It is a great pity that we cannot know better the state of the liver in this group of cases and therefore plan better preoperative and post-operative treatment, for after operations upon the gall bladder, if death occurs, it is usually not post-operative pneumonia nor general peritonitis that is the cause, but hepatic insufficiency.

With the utilization of all the diagnostic methods at our command, history, physical examination, various laboratory procedures, and cholecystography, we believe we should be able to make a correct diagnosis both as to the presence or absence of pathology as well as its nature and degree in about 90% of the cases.

TREATMENT

After the diagnosis has been made, what is the

proper method or treatment? Is surgical or non-surgical therapy indicated? And if surgery is decided upon, what is the operation of choice? What are the chances by the various methods of cure or relief? What is the percentage of failures and what are the possible complications?

There is an ever increasing feeling that in the treatment of diseased gall bladders, surgery has been disappointing in a number of cases. Is this feeling justified, and if so what is the cause of it?

To my mind there is no question that in the very definite, very severe lesions of the gall bladder—suppuration, gangrene, perforation, stone—where frequent or severe attacks of gallstone colic take place, surgery is the only procedure to consider. Whether, in the former group, to operate during the acute stage, doing a cholecystectomy if possible, whether to wait until that state is over, confident that even if perforation does occur, the omentum will prevent general peritoneal infection, is still a moot question. Graham, for instance, "has not advised an operation on an acute gall bladder for four years and except for the finding of an occasional pericholecystic abscess, which probably represents the perforation of an acutely inflamed gall bladder, has seen only two cases of perforation causing general peritonitis."

Mentzer, on the other hand, says "perforations on the upper aspect of the gall bladder and those that are immediately walled off by the omentum may be operated upon later, but in the present state of our knowledge we apparently cannot diagnose a case of perforation from a gangrene or acute empyema." . . and he, therefore, advises immediate operation.

Most surgeons agree with the former view, a smaller but increasing number with the latter view. When surgeons differ, what is a mere clinician to believe and to advise? Is it safer to operate or not operate immediately on these cases? Are they to be regarded as emergency or semi-emergency operations or as cases where it is wiser to wait until the acute process has subsided, (and most of these cases I believe will subside) or is immediate operation indicated?

I feel quite sure that a few cases unquestionably need immediate surgery. I feel equally sure that for no reason that I have been able to determine, this group of cases is increasing, but how to determine this relatively small group, that is the rub! On the other hand, I believe that by a thorough analysis of every case, by having no fixed general rule, by regarding each as an idividual problem, by weighing all the factors—the general condition of the patient, the leucocyte count, especially the differential count, the temperature chart, the examination of blood and urine, and intensive clinical study of the patient, we can usually, although not always, decide whether the case is subsiding or becoming progressively worse.

There is of course no question in my mind that in the latter group immediate operation is indicated. In the former group, I feel equally sure mortality is likely to be lowered by performing an interval operation after the acute inflammation has subsided. (We must, however, not forget that the symptoms and signs of these cases may occasionally be so slight that gangrene and perforation may take place with very slight local, and no very striking general, signs or symptoms.)

As to the prognosis in cases of operations on the gall bladder, even in those with symptoms of severe infection, it is usually good, and if they weather successfully the immediate operative and post operative dangers, their subsequent condition is usually excellent. It is rather a wise rule to remember that in abdominal surgery the more severe the symptoms, the more definite the diagnosis and the more obvious the surgical need, the better the results obtained.

In the chronic cases of cholecystitis, with or without stones, when the symptoms are not fulminating or acute, when the attacks are not severe or frequent, what should be our attitude as regards treatment? Does surgical or non surgical treatment offer the best prognosis? Should we accept the view of certain surgeons and say every diseased gall bladder should be removed as early as possible because by so doing a potential focus of infectiin will have been removed, the associated hepatitis and biliary tract infection will usually quickly subside, it will minimize the possibility of secondary lesions—pancreatitis, diabetes, persistent functional dyspepsia—and the possibility of malignant degeneration will be reduced to a minimum? Or should one say it is in just this group of cases that operation should be postponed indefinitely, if possible, because the dangers of waiting are far outweighed by the possible or probable post operative sequelae? What are these possible sequelae? Post operative adhesions, a common duct stone, possibly somtimes pushed down into the common duct during the manipulation of operation, and either of these often absolutely reproducing the original syndrome or producing a new syndrome often as bad, such as periodic attacks of greater or lesser obstruction or periodic attacks of biliary tract infection or even persistent low grade biliary tract disease, producing symptoms sometimes more severe than the original picture; the fact that the functional disturbances often remain after gall bladder removal and have become so well established that they, not the underlying pathology, dominate the picture, or to a fundamental misconception of certain of these cases which in reality present symptoms far more referable to diseased liver and biliary tract than to the gall bladder alone, the gall bladder playing but a minor role. Here its removal, even with the compensatory biliary tract dilatation, often brings about no benefit and often real harm by the effect of post operative adhesions. Perhaps even more important still is the fact that we have removed a crutch on which we may have to lean heavily if the infection of liver and biliary tract does not subside.

It is an argument in favor of cholecystostomy in certain of this group of cases rather than cholecystectomy, because, if the better drainage from cholecystostomy does not clear up the picture, the gall bladder may then be anastomosed to the stomach to bring about free permanent drainage, a far wiser and safer procedure than a long drainage through a densely tied up common duct by means of ordinary catheter or T tube or by an attempt to establish a fistula and then transplant it into the stomach. It seems to me a very wise rule to consider long before cholecy-

stectomies are done when there is very marked evidence of hepatitis or of extensive infection of the rest of the biliary tree. Of course I am sure cholecystectomy is by far the best operation in the vast majority of cases. I am equally sure it is the worst operation in that small group where there is evidence of extensive disease of liver and biliary tract as well.

These cases, quite frankly, are not treated with especial success by medical measures and I should personally feel far safer if first a cholecystostomy were done to see the effect of its long free drainage or even to do an immediate cholecystogastrostomy so as to bring about permanent drainage.

I feel very strongly that in the case of chronic cholecystitis, unless the operative indication seems very definite, especially if the picture is blurred and the symptoms indefinite and where we lay our diagnosis more on the altar of cholecystography than on that of symptomatology and in cases where there is evidence that the symptoms are increased by an unstable psyche, it is wiser to postpone operation sometimes indefinitely, sometimes until we have definitely proven that all other measures are ineffective.

In this group of cases, what medical measures can we offer? What is their chance of relieving the symptoms in whole or in part, in bringing about a clinical cure even if not an anatomical cure, because of course no medical measures can dissolve gallstones, cause adhesions to diseappear or make new a mucous membrane or bladder wall that has been chronically thickened by disease? What are the principles of the medical treatment of these cases? What can it hope to do? Is it likely to be successful in a considerable proportion of the cases? Can it produce a clinical cure in many cases? Can it relieve a number so that the patient is relatively well? Will it be so effective that fever or jaundice or evidences of periodic common duct obstruction or attacks of gallstone colic will not recur? Or, if they do, will they be of so much less intensity and severity and at so much longer intervals that the patient is satisfied? Will the underlying pathology be improved or at least not progressive? As I see it, our two main objects in medical treatment are—first, to minimize the chances of reinfection of biliary tract; and second, to promote free biliary drainage. The first is brought about by keeping mouth, teeth, tonsils and sinuses in as perfect condition as possible; by avoiding in the diet mechanical, chemical or thermic irritants, highly seasoned foods, rich foods, excessively coarse foods, and probably alcohol in most cases, so that the chance of gastritis and duodenitis is reduced to an irreducible minimum, and to avoid constipation or diarrhoea so that there is a minimal chance of infection from the colon.

The weight of evidence is certainly in favor of the lower bowel playing a considerable role in these cases and some believe that there is rarely gall gladder infection without a preceding colitis. In the majority of cases, appropriate diet with large amounts of the softer fruits and greens, the elimination of astringent foods, and the installation of a regular habit is all that is necessary, with, of course, the general hygienic measures so necessary to every bodily function—plenty of sleep, a normal amount of exercise, fresh air and play, and as much freedom from worry as is possible in this vale of tears. In many cases, this is all that is necessary, but in some laxatives have to be used as well. It is unquestionably true that the vast majority of cases with recurrence of symptoms in biliary tract disease are due to reinfection and it is therefore essential to minimize this possibility by every means at our command. There is, however, very little evidence that specific disinfection of the gall bladder or biliary tract, as Hurst has suggested by the use of methenamine, is possible for although the drug is eliminated in the bile, it is in such a minimal amount and so much diluted as to make me feel that it cannot have an appreciable bactericidal effect.

As to the second requisite in treatment, the promotion of free biliary drainage, we have many means at our command but none so good as that method most physiologic of all—the utilization of the normal gall bladder emptying by the intake of food. Frequent feedings, a proper non-irritating diet, with large amounts of those substances especially effective in emptying the gall bladder, such as butter, cream, olive oil and especially egg yolk, these foods to be given in large amounts even if gallstones are present for the evidence is distinctly against their playing any definite role in gallstone formation. In my experience the only justification for their elimination is when jaundice is present. This is the fundamental dietetic procedure. It is really quite remarkable how often olive oil before meals or on waking, or one or two raw eggs at night will bring about a rapid emptying of the gall bladder and often act as a gentle laxative as well. We use these foods in cholecystography; why be afraid of them in our treatment of disease?

All the salines help—a morning dose of phosphate of soda, magnesium sulphate, the Bourget mixture, ordinary table salt or lemon juice and soda, or perhaps better still a smaller dose shortly before each of the three meals, given preferably in hot water, is often singularly effective. It is well to remember that magnesium sulphate is not a specific, is not sacrosanct, that all salines have the same effect to a greater or lesser degree. One should also not forget that magnesium sulphate by mouth in capsules or in saturated solution, is just as effective a cholagogue as when administered through that most unphysiologic of instruments, the duodenal tube. It may be good psychotherapy to use it in certain cases; it certainly is not indicated as a physical agent and I for one prefer to give my suggestive treatment, if that seems necessary, by more rational, less expensive and less time consuming methods.

These are our two main methods of attack, and while in certain cases antispasmodics such as belladonna, or mild sedatives such as luminal or the bromides, or hydrochloric acid if the gastric acid is absent, may help, it is upon these two procedures that we must place our main reliance. How many cases can we help by these methods? Few, if any, of the fulminating or acute lesions, a fair proportion of cases with gallstone colic, a large number of cases of chronic cholecystitis with or without stone. How large a percentage of success in this large group? We cannot say, for it is practically impossible in the proportion of cases so treated to determine how many helped greatly, how many have been cured clinically, or how many have been complete failures. I have a

feeling, however, that a very large proportion of cases may be helped by such a method of treatment if the patient is willing to follow the treatment in principle for a long period of time, perhaps even indefinitely. In my own practice I have a large number of patients who have been comfortable and symptom-free for a long period of time by such procedures alone; even in cases with demonstrable stones or with definite evidence from an X-ray viewpoint at least of considerable gall bladder pathology; cases in which there is no evidence of any progressive damage being done to liver, biliary tract, gall bladder or pancreas by such an expectant therapy and where for long periods of time there has been no recurrence of acute or subacute infection, enlargement of the liver or of any other findings to suggest any damage to liver function. But to repeat, here as in any case of chronic disease elsewhere, the patients must follow certain general directions as regards diet and personal hygiene if they hope to remain symptom-free.

What is the percentage of cures of these cases that are treated surgically? Ask the surgeon and he will tell you from 85% to even 90% or more. But this, I am sure, is far too high, for the surgeon is an incurable optimist; it is often impossible for him to know of his failures, for when there are failures, the patients rarely return to the surgeon for advice but go to an internist or to another surgeon.

In our Clinic at the Johns Hopkins Hospital something more than one-quarter of our operative cases, cases chosen with great care as fit subjects for surgery by a conference of surgeons and clinicians, come back to us complaining of the same symptoms or different symptoms, but complaining! When I was asked a year ago to read this paper, I started on an analysis of the results in 84 cases in my private practice in whom I had advised surgery and where it was possible to find out either by personal query and examination or by the answers to a complete questionnaire as to what the ultimate result of the operation had been. In 63 of these cases, cholecystectomy had been performed; in 13 cholecystostomy; in one cholecystgastrostomy; in one choledochotomy; and in the remainder simply the the separation of adhesions; four had had a cholecystectomy following an earlier cholecystostomy. Four cases died in the hospital, a surgical mortality of 4.7%, which is a little higher than the 3.6% in Eusterman's series of 804 cases. Of the entire series, 65% had had a complete cure, a relative cure or relief from the disagreeable symptoms. But this leaves the rather striking figures of 35% in which operative treatment was unsuccessful. The percentage of success was considerably higher after cholecystectomy than after cholecystostomy.

I, for one, therefore, cannot feel that surgery should be indiscriminately advised for all cases of gall bladder pathology; it has a definite mortality; it has a considerable portion of failures; it has many post operative possibilities which may make the second state of the patient the same as, or even worse than the first.

May I at the risk of repetition again stress my belief? That while in those cases where the clinical picture is a severe one, a very clear cut one, one with very marked local or general symptoms, surgery is the only safe reed upon which to lean; in the milder, less definite and more chronic type of case, it seems better at the present writing to try first the simpler and perhaps safer medical measures. Many of these latter cases remain symptomatically cured if they are willing to follow a certain regimen, not an onerous one; some, and not a negligble portion, may later have to have recourse to surgery either because they get tired of such a regimen or because they do not get sufficient relief from it to make one feel that one is justified in continuing it.

CONCLUSION

In this paper I have tried to bring before you the results of my experience in this field, my credo, if you will, and to ask you to share with me certain beliefs that have through many years gradually crystalized in my mind and which have helped me in my attempt to attack this very difficult problem in the way that is best for patient and for doctor.

I am sure that it is wrong to consider the gall bladder as a separate entity and not as a part of the entire biliary tree, although in a considerable proportion of cases the major portion of the pathology is concentrated there. It is in this group of cases where surgical attack upon the gall bladder is likely to be most successful. I am convinced in analyzing the symptoms we must determine how many are referable to the gall bladder itself, how many to liver, ducts and biliary tract, for on this must rest our decision as to medical or surgical treatment; and if the latter is decided upon, what is the best operative procedure? I am quite sure that, while cholecystectomy is the operation of choice in the vast majority of cases in which surgery is indicated and that in a good many of these cases complete relief may be obtained by the removal of the gall bladder, where there is evidence of extensive liver and biliary tract infection as well, it is far wiser, if surgery is to be done, to employ cholecystostomy, possibly followed later by cholecystectomy or cholecystgastrostomy.

I have touched upon the physiological basis for medical and dietetic treatment; its simplicity and its success in a fair number of chronic cases if carried out conscientiously, but I have tried not to over-emphasize its value because surgery must be utilized in most of the severe and many of the milder cases. Finally, for after all what is the value of treatment if diagnosis is not correct, I have tried to preach the doctrine of thoroughness in reaching one's final conclusions as to the underlying pathology; I have insisted upon the absolute necessity of a careful history of the case as well as the utilization of all the laboratory methods at our command; I have pointed out the difficulties in diagnosis in this field because of the striking tendency of the gall bladder to mirror symptoms due to disease elsewhere and in turn to be the cause of referred symptoms.

To me this will always be a fascinating field, a field beset with many difficulties, a field in which we often must grope rather blindly for a while but one which I feel sure will become easier and easier of exploration if we attack each individual case thoroughly and scientifically, without prejudice and without bias, and if we try to learn as much, or more, from our failures than from our successess.

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An Analysis of the Results of Gall Bladder Surgery

BY T. R. BROWN and JOHN T. HOWARD

On July 15, 1932 the office files of one of us (T. R. B.) contained 84 case records of private patients who had had surgical exploration of the biliary tract at our advice. Needless to say, in all of them gall stones or inflammation of the gallbladder or of the bile ducts was diagnosed before operation; no cases of suspected malignancy, of hepatic cirrhosis, nor cases of abdominal exploration without a fairly definite diagnosis of gall tract disease were included. Operative notes were available on all of these patients. Of these 84 cases who had had preoperative diagnoses of biliary tract disease, such disease was found by the surgeon (and, in most cases, by the pathologist) in all but three of them. But more about the findings at operation later! It is now of interest to glance, briefly, through these history cards to note the soil in which these diseases have thrived and to observe some of the by-effects of their presence in the body.

Of the 84 patients 25 were males and 59 (70.2%) were females. Of the females 35 (59.3%) had borne children and the average number of full term pregnancies in these child-bearing women was 2.6. In only 5, or in 8.4% of all the women, was the onset of symptoms related to pregnancy. 15 (20.0%) of the patients had had typhoid fever. On the records of 9 others this disease was not mentioned and, therefore, we are not certain that they did not have it. The average age of the patients at the time of operation was 47.8 years. The oldest patient was 72 and the youngest was 24. In 80 of the cases the average duration of symptoms prior to surgical treatment was 5.3 years—rather a shorter time, we believe, than one would find in a study of a similar group of dispensary patients. In 4 cases the date of onset of symptoms was very indefinite. A story of jaundice with pain was obtained in the histories of 21 (25.9%) patients. In three histories the presence or absence of jaundice was not noted.

In 50.0% (41) of our cases enlargement of the liver was noted at physical examination. In 2 histories the size of that organ was not mentioned.

The classical hypoacidity of biliary tract disease was not noted in this group of cases from data obtained from a single gastric gavage on each patient forty-five minutes to one hour after an Ewald meal. Records of the gastric acids were obtained in 59 of the 84 cases. Twenty-seven of the 59 had normal gastric acid values (20-40 units of free hydrochloric acid and 40-60 units of total acidity.) Sixteen showed hyperacidity; 9 showed hypoacidity. Achlorhydria to bread and water stimulus was found in 7 cases.

An attempt was made to study the biliary tract roentgenographically in 44 of the 84 patients. In 5 of this group simple roentgenograms only were made of the gallbladder area. In 4 of the 5 gall stones were reported from evidence on the flat plate. In 3 of the 4 the surgeon found gall stones; in the fourth no stones were discovered at operation. The patient in whom stones were not visualized by this method did not have gall stones at operation. Thirty-nine patients of this series had the gallbladder investigated by the dye method. To most patients dye was given orally; to a few it was administered intravenously. The report of a roentgenographically normal gallbladder was received in three cases. In one of these cases an unquestionably normal gallbladder was found and removed at operation. In this case there were many adhestions in the right upper quadrant and to these we ascribed the symptoms. To our recent questionnaire the patient replied that her symptoms had not been benefitted by the operation. In a second case which showed a gallbladder normally filled with dye, gall stones and advanced cholecystitis were found. It must be admitted that the roentgenographic study of this gallbladder preceded the surgeon's cholecystectomy by twelve months. In that period a great deal probably went on in that gallbladder, though the symptoms at the time that the roentgenograms were made were the same symptoms which precipitated surgical intervention. The third case of this roentgenologically normal group was said by the surgeon to have a mild chronic cholecystitis and the gallbladder was removed. The pathological report read, "A normal gallbladder." The dye method of examination showed some abnormality of the gallbladder in 36 patients. Stones were visualized in 19 of the 36. In 18 of this 19 the surgeon found stones. In one stones were not found and the surgeon said that the gallbladder was normal. He did remove it and the pathologist reported "a chronic gallbladder." The patient has reported that he is perfectly well two years after the operation. The roentgenologic diagnosis of gallbladder disease was based on non-filling of that organ in 8 cases. In 5 of these cholecystitis and cholelithiasis were found by the surgeon. In 2 cholecystitis alone was found and in 1 cholecystitis and bile mud were discovered at operation. In this last case cholelithiasis had been diagnosed clinically before operation. In 8 cases the roentgenograms showed no more than a poor concentration of dye in the gallbladder and on this basis alone a pathological gallbladder was suspected by the roentgenologist. Six of the 8 cases showed cholecystitis and stones; 2 cases were found to have cholecystitis only. One patient was operated on without other roentgenologic evidence of biliary tract disease than an irregular contour of the gallbladder. Upper right quadrant adhesions only were found at operation and, in the opinion of the surgeon, the gallbladder was normal. At our insistence the gallbladder was removed and a chronic cholecystitis was reported by the pathologist. Irregular gallbladder contours were noted in 2 other cases in association with more diagnostic roentgenographic evidence of gallbladder disease. In only one of these patients to whom dye had been given was sluggish emptying noted by the roentgenographer. We do not consider the gallbladder's emptying of significance in the decision for or against surgical treatment of gallbladder pathology. Before leaving this topic we may say that a low concentration of dye was often associated with the visualization of stones. We have not mentioned this low concentration where a more important radiographic sign was present.

And now for the findings at operation! Of the 59 cases diagnosed as acute or chronic cholecystitis

WITH gall stones, this diagnosis was completely confirmed in 57. The fifty-eighth case showed gallbladder inflammation with bile "mud," and the fifty-ninth revealed a gallbladder which, to the surgeon, seemed to be normal. Under "medical pressure" he removed the gall sac and the pathologist reported "chronic gallbladder." Cholecystitis alone was diagnosed 25 times and it was found alone in 14 of these cases; it was associated with gall stones in 8. The cholecystitis diagnosed was not found in 3 cases. Adhesions or a mild chronic appendicitis seemed to be the only organic basis for symptoms in 2; a third had a normal gallbladder.

Cholecystectomy was performed 63 times as a primary operation and 4 times after previous cholecystostomy. In this series cholecystostomy was done on 13 patients. Once a cholecystgastrostomy was the operation of choice and once a choledocholithotomy was done for a stone which, presumably, had been overlooked at a previous cholecystectomy. In 2 cases no other surgery was done than the separation of adhesions in the right upper quadrant and the removal of the appendix. Four of the 84 patients died in the hospital of operative or of postoperative complications. This was a surgical mortality rate of 4.7%. The exitus of one was via postoperative ether pneumonia; or another, operative shock; a third develoyed intestinal obstruction and died after a second operation; the fourth developed a bile sinus which eventually communicated with the peritoneal cavity and produced a general peritonitis.

We have attempted to follow the 80 cases who survived operation. Admitting its defects, we have believed the questionnaire method of determining the present condition of these patients to be most practical. We have also had the opportunity of personally questioning and of re-examining a number of the patients in this group. Our questionnaire was similar to that of Catell ( ) of Lahey's Clinic. We asked for replies to the following questions: 1. Have you had complete relief from your gallbladder symptoms? If you have not obtained complete relief, what symptoms have you had? 2. Have you been jaundiced since the gallbladder operation? 3. Do you complain of gas, belching, a feeling of distension or of indigestion? 4. Have you had further operations or X-ray examinations? 5. Have you other abdominal complaints? Eighty questionnaires were mailed. Seven were returned by the postal service because the addresses could not be found. Eight patients were not heard from and 65 returned to us more or less detailed reports about themselves and their symptoms. From these replies and aided by our general knowledge of the patients (every history had a more or less comprehensive note about each patient's nervous state) the cases were classified after the manner of Davis ( ). The first group contained those patients who seemed to be completely cured, i. e., there were left no symptoms to remind the patient of his old trouble. In the second group the patients were relatively cured or had obtained relief from all the more disagreeable symptoms but occasionally they had mild upper abdominal discomfort. The third group was termed improved and contained those patients who still had symptoms but who were decidedly better than they had been before operation. In the fourth group were those not improved by surgical procedure. From the replies to our questionnaire and from our knowledge of the patients we concluded that 28 of the 65 who had answered us had been completely cured by surgery. Ten had been relatively cured; 12 were improved; 13 were not improved; 2 patients had died between the date of their discharge from the hospital and the date of the questionnaire. Answers were received from 49 patients who had had cholecystectomy as their primary operation. Twenty-five (51.0%) of them were unquestionably cured. Six (12.0%) were relatively cured. Nine (18.0%) were improved and 9 were not improved. Nine of the 13 patients who had had cholecystostomy replied to our questions. Two of them seemed to be really cured. Three were relatively cured. Two were improved and 2 were unimproved. Three of the 4 persons who had had cholecystectomy after an earlier cholecystostomy replied. The second operation had completely cured 1; 1 was relatively cured and 1 was unimproved. The patient who had had a cholecystgastrostomy for a pancreatitis associated with a cholecystitis was improved. One patient who had had upper right quadrant adhesions was unimproved by appendectomy and the separation of these adhesions.

From the data in this small series of patients it is again apparent that cholecystectomy is the operation of choice where surgery is indicated for the treatment of cholecystitis with or without stone. With it two patients out of three will receive striking and satisfactory improvement. It is interesting to compare our report of the results of surgical treatment of gallbladder disease with the recent figures published by Judd and Priestley ( ). Their series was a very large one and over 90.0% of their cholecystectomy patients are reported as having secured "a satisfactory result" from the operation. In the same paper they state that "Following cholecystectomy only 17.0% of the patients had any pain in the upper part of the abdomen, and this was usually not accounted for by recurrent biliary lesions." It is quite natural for the surgeons to be charitable to surgery. It is just as natural for the general practitioner and the internist to be critical of surgical treatment, for to them come the disappointments of surgery. Before too high a percentage of cures after surgical treatment of gall tract disease is generally accepted it will be well to have more statistical data on these matters reviewed by medical men.

"I would rather fail in a cause that I know some day will triumph than win in a cause that I know some day will fail."—Woodrow Wilson.

Alexander Graham Bell, a teacher of the deaf and dumb, finally enabled people to talk across hills and valleys.

Andrew Carnegie was once an unknown poverty-striken operative in a factory, who became the most generous and princely of idealists.

Thomas A. Edison was once a newsboy on a train, who became the maker of a thousand wonders.

Combatting the Increasing Death Rate From Diabetes

BY SEALE HARRIS, M. D.
Birmingham, Ala.

Six years ago at the New Orleans Congress of the American College of Physicians Frederick Allen called attention to the increasing death rate from diabetes, even though with insulin and proper dieting deaths from uncomplicated diabetes should be of rare occurrence. A more recent study of America's great medical statistician Frederick L. Hoffman, for many years Chief Statistician of the Prudential Life Insurance Company, shows that the death rate from diabetes continues to increase, "regardless of the insulin treatment and other advances in medicine."

Hoffman's statistics derived from a study of the diabetes mortality rate in 50 cities in the United States show that the diabetes death rate has increased from 15.9 in 1912, to 24.6 in 1931, per 100,000 of population. The total number of deaths from diabetes in these 50 American cities, with a popula tion of 21,244,714 in 1912, was 3,373; while in the same cities, with a total population of 30,987,422 in 1931, the number of deaths was 7,610. The death rates from diabetes in the three largest American cities are inordinately high, i. e. Chicago 27.4, New York City 27.1 and Philadelphia 20.7 per 100,000 of population. No death rates from diabetes in the rural districts have been published; but it is hoped that when the mortuary statistics of the 1930 census appear valuable data regarding the distribution and death rates from diabetes in the various sections of the country may be available. It is believed that there are fewer cases of diabetes in proportion to population in the country than in the cities, but it may be assumed that the diabetes death rates in rural communities are relatively as high as in the cities.

Many causes for the increase in the death rates from diabetes have been suggested. An acual increase in diabetes is thought by some to account for the higher mortality rates from that disease; but probably the most important factor is that, with the feeling of safety which the use of insulin has engendered, diabetics have become more careless in following their diets. The diabetic death rate has not increased, but on the contrary deaths from uncomplicated diabetes have been practically eliminated in hospitals, where the treatment has been directed by clinicians like Joslin, Allen, Wilder, Woodyat and many others; and even in the neglected cases, with coma and gangrene, in the hands of diabetic clinicians deaths are exceedingly rare. Considering these facts one cannot escape the conclusion that an important factor in the increasing death rate from diabetes is the inadequate treatment of the disease by diet and the use of insulin.

THE DUTY OF THE GENERAL PRACTITIONER TO HIS DIABETIC PATIENT.

The treatment of diabetes is so simple that children of ten and twelve years of age learn to weigh and measure their food, calculate their own menus in grams and calories, analyze their urine and administer insulin to themselves when needed. There is no excuse, therefore, for the general practitioner,

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who must necessarily treat most cases of diabetes, not being able to direct the diabetic's diet and insulin therapy. But does the general practitioner who sees but one or two diabetics a year have the incentive to master the dietary management of the diabetes? If the physician is prepared to direct the treatment of diabetes, does he have the time, or give the time, to teach his diabetic patient, or the diabetic child's mother the principles of nutrition and the use of insulin when necessary?

Judging from the statistics quoted by Hoffman it appears that even though there are medical centers in the large cities, and many clinicians in private practice who are adequately prepared to treat diabetes, and whose death rates in diabetes must be very low, almost nil from uncomplicated diabetes, the average urban general practitioner either does not treat his diabetics properly, or there are many diabetics who have no treatment, or who do not follow the diets given them by physicians qualified to treat diabetes. The ignorant, the self indulgent and the poverty stricken diabetics usually are doomed to early death; and no doubt a considerable number of cases of diabetes belong to those classes, but there is no reason to think that there is more ignorance, perverseness and poverty in 1930 than in 1912. Certainly there is little hope of diminishing the death rates among those who cannot, or will not, be educated in the simple principles of the nutrition needed to control diabetes; but help in getting the proper food may be given to indigent diabetics by the Red Cross and other welfare relief organizations in various cities.

In the treatment of diabetes, as in every disease, only what is best for the patient should be considered; and the conscientious physician must decide for himself whether or not he is prepared to teach his trusting diabetic how to calculate food values in grams, and calories, and whether or not he understands how to adjust the insulin dosage and diet to fit the patient's individual needs. The physician treating diabetes must give adequate time to educate the patient if he hopes to get results. The best diabetic clinician is the best teacher, but "a little learning is a dangerous thing" for the diabetic and for the physician who treats the disease. As has been said before, there is no reason why any general practitioner should not become adequately prepared to treat diabetes, but if he is not, obviously it is his duty to refer his patient with diabetes to some one who has had the training and experience necessary to deal with such cases. The growing diabetic death rate is a reflection on the medical profession.

THE ADVANTAGES OF A BRIEF PERIOD OF HOSPITALIZATION IN TREATING DIABETES.

No one doubts but that the patient with tuberculosis stands the best chance to get well if he can have the educational advantages of even a short stay in a tuberculosis hospital; and so the diabetic will be more apt to learn how to manage his case if he can have hospital care under a clinician who has had a larger experience in teaching diabetics than the general practitioner who sees only an occasional case. This is particularly true of diabetic children. John of the Cleveland Clinic asserts that every diabetic child should be treated in a hospital until the diet and insulin dosage can be adjusted to the child's nu-

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tritional needs; and what is still more important, until the mother of the diabetic child can be taught the care of her child. As John aptly and forcefully says: "The life of the diabetic child is in its mother's hands, and she should not leave the hospital with her child until she has confidence in her ability to adjust the diet and insulin dosage to meet the varying conditions incident to the growth and development of her child."

Prior to Banting's discovery of insulin diabetes was very fatal in children; but now with insulin and diet, with an intelligent co-operative mother, the infant or adolescent diabetic may be given sufficient food to meet his needs for growth and development. Indeed, it appears that under such conditions diabetic children grow faster and develop mentally better than their brothers and sisters who do not have to be careful about their diet.

No doubt the tuberculosis hospital has played a considerable part in the reduction of the death rate of the "white plague," both by curing, or arresting the disease in the tuberculous patients; and each patient with tuberculosis who has had hospital treatment, goes home and teaches others how to prevent the disease. Likewise the death rate in diabetes may be lowered when physicians consider it their duty to send their diabetics for a stay in a hospital long enough to learn how to have diabetes and live. The diabetic who has had hospitalization goes home and he teaches the other members of his family the dangers from overeating, which no doubt is one of the most important causes of diabetes. The diabetic who knows diabetic arithmetic always takes delight in teaching other diabetics what he knows about diet and nutrition. While the diabetic should be taught that he can help other diabetics in working out their diets he should be shown that he is not prepared to treat diabetes except with the co-operation of a physician.

Of course, there are many diabetics, particularly during the present depression who have not the money to go to hospitals for even a few days, though they can get ward rates and many have not the money to pay physicians fees; and since the diabetic diet, which consists largely of vegetables, fruit, cream, and meats, is expensive, many poverty stricken diabetics must suffer, and some of them die. If the patient can procure enough money to pay for a few days in a hospital, and is not able to pay physicians fees, the clinicians on the staffs of hospitals are always glad to give their services to indigent patients; and likewise the general practitioners are ready to treat any worthy diabetic who is not able to pay for his services. It is a difficult situation for the indigent diabetic in the year 1933, and one would expect an increase in the diabetic death rate; but that may be offset by the fact that many diabetics cannot get the food to overeat, and also the incidence of diabetes may be lessened because of "chill penury."

While making investigations regarding food conditions in Germany after the signing of the Armistice in 1918 I was informed by German physicians that the incidence of, and the death rates from, diabetes was greatly reduced in Germany, since the first year of the World War when the Allied blockade became so effective that the whole German population suffered for lack of food. Perhaps one of the compensations for the distressing time through which we are passing will be a decrease in diabetes because of the enforced temperance in eating by so large a part of our population.

THE ETIOLOGY AND PREVENTION OF DIABETES.

The death rates from diabetes may be reduced most by preventing the disease; and much may be accomplished by the individual physician himself first understanding the etiological factors in diabetes; and when he has a patient, who is predisposed to the disease, he may prevent his becoming a diabetic by giving him the proper instructions regarding diet and personal hygiene.

Allen speaks of diabetes as "the vestigium of a burnt out conflagration" of the pancreas; and no doubt a previous pancreatitis is the most important etiological factor in diabetes. The foci of infection for the pancreatitis that precedes diabetes may be the tonsils, teeth, rectum, colon, prostate, female generative organs, or in any organ in the body. I have seen too many cases of diabetes with a history of a previous attack of influenza, not to believe that "flu" may be an overlooked factor in the pancreatic infection that precedes diabetes. Likewise, the acute infection of childhood, particularly scarlet fever, and also typhoid fever, may be causes of undiagnosed pancreatitis, which leaves a damaged pancreas.

Gall bladder infections are associated frequently with pancreatitis; and surgical drainage in gall bladder infections has in many cases resulted in an improved carbohydrate tolerance in diabetics. Joslin says that "gall-stones often precede diabetes and may precipitate it by direct extension of infection to the head of the pancreas." He suggests that since gall bladder infection, gall stones and diabetes are so often associated they "may have a common origin." He adds: "It is sound doctrine to advise the removal of gall stones to avert diabetes." Likewise the removal of an infected gall bladder may prevent diabetes.

Trauma may be the cause of a pancreatitis that precipitates diabetes. I reported two such cases in 1923. Recently I have had a case of hyperinsulinism which apparently followed an abdominal injury in which no doubt there was trauma of the pancreas, though the pancreatitis was not recognized at the time. If every case of abdominal injury was suspected of resulting in pancreatitis, no doubt many cases would be recognized that now are overlooked. When pancreatitis is recognized the patient should be instructed to live on a low carbohydrate diet probably for the rest of his life, because such a patient is a potential diabetic.

The theory of a previous pancreatitis should not make us underestimate over eating as a large factor in the production of diabetes. The greatest of all diabetic clinicians, Joslin, and others, have stressed obesity as a fore-runner of diabetes; and the physician may prevent diabetes in his overweight patient by pointing out to him the danger of countinuing his eating habits, by giving him a reducing diet and following up the case to see that he carries out instructions until he has become of normal weight for his age and height.

HYPERINSULINISM MAY PRECEDE DIABETES MELLITUS (HYPOINSULINISM)

The spontaneous excessive secretion of insulin

(hyperinsulinism) is a definite disease entity, a symptom of which is hunger, so that the individual who has hyperinsulinism eats excessively and often between meals. The more he eats, particularly of the rapidly soluble carbohydrates, particularly cane sugar products, which stimulate insulogenesis, the greater the degree of hypoglycemia two or three hours after meals, when more food is needed to prevent a spontaneous insulin reaction; and so obesity results. A damaged pancreas from previous infection is probably the most important etiological factor in hyperinsulinism as it is in diabetes, and the overworked islet cells become exhausted and a deficiency of the secretion of insulin (hypoinsulinism) diabetes mellitus, the antithesis of hyperinsulinism follows. In other words, first a pancreatitis, followed by excessive secretion of the islet cells (hyperinsulinism), then superalimentation, which exhausts the islet cells, then diabetes.

Several of my first patients with hyperinsulinism were overweight, and had a history of glycosuria which suggested that hyperinsulinism may precede diabetes mellitus, just as hyperthyroidism sometimes is followed by hypothyroidism (maxedema); and in a symposium on diabetes, in which I discussed the etiology, at the meeting of the Virginia State Medical Association in 1923, I expressed the opinion that hyperinsulinism associated with obesity was one of the causes of diabetes. Since then I have regarded my hyperinsulinism patients as potential diabetics and have dieted them accordingly.

In the last few years on careful questioning of my diabetics, particularly those who were overweight before developing diabetes, a number have given a history of excesive hunger, and a feeling of weakness and nervousness between meals, requiring food for relief. In one of these cases the history was so clearly that of hyperinsulinism it cannot be doubted that she had spontaneous hypoglycemic reactions before becoming overweight, and before she developed diabetes. She said: "Two or three hours after meals I would get so hungry, weak and faint that I felt like I would die if I did not get something to eat, and therefore, I was eating all the time." She also said that she would almost collapse if her meals were delayed. She was underweigtht until she had those symptoms, when on account of her excessive appetite and eating between meals, she became overweight. A few months later she developed polyuria, nocturia, pruritis vulvae, weakness and loss of weight, and it was found that she had diabetes. Her blood sugar curve after a glucose tolerance test is typical of a moderately severe case of diabetes. She is an intelligent woman and learned to calculate food values, and maintains her weight and health on 135 grams carbohydrate, 60 grams protein and 150 grams of fat a day, and ten units of insulin three times a day. She had had several insulin reactions which she says affect her exactly like the hungry weak spells she had before developing diabetes.

The familiar tendency to diabetes has been observed frequently. It is interesting to note that this diabetic mother has a son who is underweight and has developed practically the same symptoms of hyperinsulinism that his mother had before she developed diabetes. He is a minister and on Sundays he would become exhausted and extremely nervous and ravenously hungry before finishing his Sunday morning sermon; but would be revived physically after eating dinner. During the week he had the same symptoms but he would eat between meals, and the weakness and nervousness were not so pronounced as on Sunday when he could not get food. His blood sugar curve after 100 grams dextrose is the typical "flat" curve of hyperinsulinism. On a low carbohydrate, moderate protein, high fat diet, with orange or tomato juice every 2 hours between meals, his symptoms have been controlled. I believe that this hyperinsulinism son of a diabetic mother is a potential diabetic.

I have had a number of cases of hyperinsulinism with sugar constanly in the urine, even though the blood sugar level is very low, i. e. 0.050 percent. It therefore, seems possible that the glycosuria in such cases is of pancreatic origin, instead of being due to a "low renal threshold." I also have had sevral cases of dysinsulinism, in which at times there was hyperglycemia with glycosuria, and at other times hypoglycemia; and in others the glucose tolerance curve shows a long fasting blood sugar, then hyperglycemia for several hours, and in four or five hours fall to a very low level. Such cases suggest a relationship of hyperinsulinism to diabetes. It therefore seems probable that the superalimentation of hyperinsulinism may be a factor in the etiology of diabetes; and that by diagnosing the disease early and placing the patient on a low carbohydrate moderate protein, high fat diet, with frequent feedings, diabetes can be prevented.

THE PREVENTION OF DIABETES A PUBLIC HEALTH PROBLEM

McCarrison is of the opinion that a diet deficient in vitamins B and C predisposes to abdominal infections; and it seems probable that a diet of white bread, white potatoes, white rice, white sugar and othe devitaminized foods, such as the majority of the American people live on very largely, may predispose to infections of the intestinal tract and secondarily to pancreatitis. The medical profession can aid in the prevention of diabetes by taking part in the campaign of education begun by McCollum to teach the American people to go back to the diet of our parents and grandparents who lived on bread made from whole wheat flour or whole grain corn meal; unpolished rice; milk and its derivatives, butter, and cheese; the green vegetables, raw fruits, and a moderate amount of meats.

Diabetes is as much of a public health problem as typhoid fever, but the death rates of the former have increased while the later is being reduced everywhere. From the viewpoint of prevention, diabetes is largely a matter of diet, or personal hygiene, while typhoid prevention is largely a question of public hygiene. Our public health authorities and the medical societies should take up the fight against diabetes. They should confer with the educators and the school boards in their communities to the end that every private and public school and college everywhere shall give instruction in personal hygiene, particularly in diet and nutrition.

The organized medical profession can also help in combatting the alarming increase in diabetes by giv-

ing the public the facts, while at the same time stressing that it can be prevented by eating more green vegetables and more raw fruits and less meats, less white bread and less sweets. Since the public has learned of the use of insulin, people generally are interested in the subject of diabetes; and now is the psycholigical time to begin the campaign for its prevention. Will the medical profession live up to its opportunities in preventing diabetes, as it has done so nobly in the fight against tuberculosis, typhoid fever and other communicable diseases?

We deeply appreciate the following letters, their reference to Percy W. Toombs issue and their very kind and encouraging words relative to the work of the editor.

Dr. W. H. Anderson,
Booneville, Miss.
Dear Dr. Anderson:

I wish you to know that I am receiving the "Mississippi Doctor" and the "Booneville Independent" with unfailing regularity and that I appreciate your great kindness and courtesy in keeping me in touch with your admirable journalistic and literary enterprises through the medium of these valuable and interesting publications.

It is not often that we see a medical man who can combine with a thorough knowledge of his profession and a wide grasp of its collective problems the talent and ability to engage in journalistic enterprises of the merit and utility of your two publications.

I was very much touched by your recent and beautiful tribute to my dear friend and one time pupil, Dr. Percy Toombs. No Eulogy was more deserved or more feelingly expressed. I read every bit of it and I thank you for the perfect way in which you interpreted my sentiments and the friendship and admiration I always felt for him, his personality and splendid career.

I note also that your "Mississippi Doctor" is not only a faithful exponent of the activities of the profession in your section of the country, but that it adds a personal touch and literary flavor to the information that it conveys. Even more, it displays a culture and a poetic taste in its editorial discussions and presentations that are rare in medical publications and that gives the "Mississippi Doctor" an esthetic quality to its utterances that are most attractive and pleasing to its readers.

For all this I congratulate you and your family who, if I may judge rightly by the names on your Editorial Staff, are your faithful associates and active collaborators in the useful task which you have so brilliantly undertaken.

With hearty appreciation and best wishes, I am

Yours very sincerely,

RUDOLPH MATAS

New Orleans, La.

Dr. W. H. Anderson,
Booneville, Mississippi.
Dear Dr. Anderson:

I have just received the February "Mississippi Doctor" and congratulate you on its excellence. I had not before heard of the death of my good friend, Dr. Percy Toombs. Your tribute to him is deserved and beautifully done. I am glad that you are publishing "Toombs Romances of Surgery."

I also appreciate your refrence to the Birmingham meeting of the Southern Medical Association. While I have no official connection with the Association it delights me very much to see it growing in usefulness under the guidance of Loranz and Dabney. Your description of the meeting is the best I have seen in any of the journals.

With best wishes, I am,

Sincerely yours,

SEALE HARRIS.

Birmingham, Ala.

EULOGY TO DR. PERCY W. TOOMBS

The writer of this article had only a passing acquaintance with Dr. P. W. Toombs, but I, like everybody who came in contact with him, could not help being fascinated with his charming personality and his brilliant intellect. His passing is indeed a great loss and real calamity to the most important branch of the profession. However, in every crisis of human experience, when the gates of the grave swing back and a great man goes in another is raised up to take his place, but the question of the hour is, Who will take the place of Percy W. Toombs?

W. C. WALKER.

Houlka, Miss.

Ole Miss Medical News

By Woodard D. Bracham

Dr. Peter W. Rowland, professor of pharmacology and materia medica at the University of Mississippi School of Medicine, was unanimously elected president of the Mid-South Post Graduate Medical Assembly at its 49th annual session held in Memphis February 14th, 15th, 16th, and 17th. His tenure of office will be the year 1934-35.

Dr. Rowland has been head of the department of pharmacology since the establishment of the Mississippi Medical School in 1903. He has been prominently identified with the various medical organizations of the South for many years and is a past president of the State Medical Association.

Formerly known as the Tri-States Medical Association, the Assembly embraced Tennessee, Mississippi, and Arkansas. In addition to those states, it now includes: Missouri, Louisiana, Illinois, Texas, Oklahoma, Alabama, and Kentucky.

William C. Gorgas was an army surgeon, apparently destined to obscurity, who freed the world from the fatal disease, yellow fever.

Robert E. Peary was a rural surveyor who finally planted the American flag upon the North Pole.

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Recent Observations In Medicine

On behalf of the officers and members of this association, I wish to welcome those physicians who have very kindly agreed to appear on our program and who have made this association and this meeting second to no other medical meeting in this country or abroad. And along with this warm and

Through the printers' oversight the following paragraph was omitted which we greatly regret:

Dr. L. H. McDaniel, Tyronza, Ark., President's address read before the 49th session of the Mid-South Post Graduate Medical Assembly, at Memphis, Tenn., February 15th 1933.

To the members of this association I wish to express the heartfelt thanks of my friends and family for the honor of being your President. Indeed it is an honor which is not deserved, an honor that has never come to any other physician as young as your speaker, an honor that is and will be prized beyond any of which I can conceive—being a leader of physicians—that group of men who go at the call of duty, to palace and hovel alike; that group of men who hear secrets and confessions not breathed to other mortals, that group of men who are often called upon to whisper consolation to poor suffering souls on the brink of the Everlasting Silence, that group of men who are trusted with everything mortal that this life affords, that class of men who labor under a system we know as medical ethics, the ideals of which are not surpassed by any organization, religious or otherwise.

Gentlemen, I appreciate your honor and beg you to overlook my mistakes as being errors of inexperience or of youthful exuberance and enthusiasm.

For the past half century it has been the custom of the political party in power to assume credit for all good things—from winning the World War on down to the sunshine, bumper crops, and good prices, when we had them. And with the characteristic attitude of the professional politician, who "points with pride" upon every good thing he can recall. I point with pride to our Mid-South Post Graduate Medical Assembly. Because we are here brought an excellent program with a review of medical facts vividly presented, with the announcement of new facts, and the proposal of new theories which may benefit mankind and bring honor and credit to the profession. However, at this point I am not going to follow further in the footsteps of the political ballyhoo artist and view everything with alarm.

To my inexperienced mind, I can see where most satisfactory results are daily and constantly coming to our profession of organized medicine. Never in the history of medicine has the ethical and scientific physician been so greatly appreciated as a gentleman of the profession. I attribute this to the new school of medical thought which takes the patient into confidence and approaches his complaint from a scientific viewpoint, and tries to advise him thoroughly yet conservatively, and to relieve in a judici-

ous and conscientious manner.

The theories of quackery with all their deception and false promises are falling into discard and disuse from their own unworthiness, all from a failure to approach medical situations from a scientific attitude. There is reason to rejoice that one belongs to a profession which is constantly on the alert for improvement, whether it be trying to find a method to give maximum doses of arsenic without reaction, or to perfect a major abdominal operation with a minimum amount of shock; a profession which is conservative enough not to accept every fantastic unproved medical dream, and yet progressive enough to be constantly striving and yearning for scientific and logical progress.

It is indeed gratifying to think that the public at large is beginning to be educated on medical lines enough to appreciate scientific approach at its true worth and relegate quackery and hoodooism to oblivion. I am indeed glad when I visit the offices and clinics of my brother physicians to find, instead of queer contrivances and appliances which were prevalent two or three decades ago, a happy abundance of X-rays, laboratories, and other scientific material of proven efficiency.

Nor would I have you, gentlemen, think that I am criticizing that great and good class of physicians of fifty or even twenty years ago, whose untold perseverance, unceasing efforts, staunch ethics, keen insight, sincere sympathy and devoted love of our profession have left the way easier for us, with the indispensable apparatus they helped devise, to approach disease scientifically and treat it judiciously. I respect their sowing that good seed of "proper approach and justified action" for we as doctors today are now reaping to our benefit and to their everlasting honor. But, gentlemen, they prepared the way. We reap the benefits; they carried their patients to a hospital on a few quilts in an open wagon, we have ambulance; they had to rely on signs and symptoms which were often fallible; we have the X-ray, microscope, and new chemical tests; they often could not take the laity into their confidence and diagnosis and treatment were often shrouded in mystery, consisting of some pet secret treatment or concoction. We have our methods of scientific approach, invite the patient's confidence, and demonstrate to him how we have reached the authentic diagnosis can suggest a treatment based on reason.

This is an age in which the public demands that things which would continue in general favor must produce the desired results and continue to produce them, whether it be a car, a radio, or a treatment for disease. Excessive advertising may prolong the unwarranted success of an inferior article, but it cannot hold up indefinitely—Abram's treatment, as well as other unwarranted theories, could not stand the powerful searchlight that an intensively alert public throws on everything, material and otherwise. I am indeed glad that to a large extent the day of placebos is over and that we are now searching for the cause of pathology to relieve it logically.

We are citizens as well as physicians and should and do have the general welfare at heart. Naturally our thoughts drift to the depression and amid the unrest of economic conditions we hear rumblings of discontent—rumblings and mutterings that the profession is overpaid. The general practitioner, who constitutes a majority of our physicians, and a majority of the membership of this association, certainly is not, nor has ever been, overpaid. His hardships, his privations, his sacrifices, his love of humanity have been common knowledge for decades, and no one dares even intimate that his financial returns have been excessive.

Then the question arises, "Is the specialist overpaid?" When we consider the cost of preparation, the ever-increasing high prices of new and improved apparatus and instruments, overhead expenses, etc., I am at once converted from a critic to a defender of the specialist. The fees of surgeons and specialists, have been reduced from 20 to 75 percent during the past three years and I challenge anyone to cite a similar profession where such reductions have been made. They have done this willingly—with a spirit of co-operation in their hearts. The expenses of the surgeon or specialist and the value and thoroughness of his work remains at its peak. Yet the returns requested by the specialist have been in accordance with economic conditions.

The Committee on the Cost of Medical Care has made an exhaustive study over a five-year period and some of the most able physicians of this country are members of this committee. The majority report impresses your speaker as being impractical in many features for patients as well as physicians in the cities and absolutely infeasible and utopian for patients and physicians not directly associated with a central hospital. Believing that there is as yet no need for state medicine, that such would have a tendency to destroy initiative in physicians, lower the class of service performed, and make too many citizens have an attitude that the world owes them medical service as well as a living without their working for same—or to call a spade a spade, make them medical dead beats—I strongly subscribe to the minority report.

Personally, I think that this committee who took five years of time and spent considerable money investigating should have had something to say regarding the failure of the costs of pharmaceuticals to decline anything in reason. Nor are the drug stores which often make from 100 to 1500 percent profit on prescriptions—and I want it well understood that I am not criticizing any pharmaceutical house or drug concern that is satisfied with a normal profit on his material—playing fair with an economically distressed people. We, as physicians, owe it to our patients and to ourselves to check up on this great leak in the cost of medical care just as the lay citizen should look into the cost of school books—which certainly constitutes a menace to the education of our youth in states where free school books are not provided.

What has the medical profession to offer in the future? We pledge ourselves to go on along the paths of "Scientific approach and justified action." We pledge ourselves to remain steadfast to those principles and ideals of medicine as exemplified by Polak, of Brooklyn, Toombs, of Memphis, and G. A. Warren, of Arkansas. We pledge ourselves to continue to treat every case as a separate entity—that the pa-

tient's welfare and not our gain may be our ever-guiding light. We pledge ourselves to try to be worthy of the name physician—a name of traditions and memories, of ideals and aspirations. We pledge ourselves to ever strive to place and hold the practice of medicine on the plane and pedestal it deserves.

Then, gentlemen of the profession, to epitomize the central thought of this address and to leave with you an ideal for thought and consideration, for the good of your patient and mine, and for the improvement of your community and mine I venture this: The next quarter of a century will see Preventive Medicine reach heights of service and appreciation that were undreamed of twenty-five years ago, and we physicians have a golden opportunity to share bountifully in their advance. In this day of depression when the value of a dollar looms tremendously we are unable to get far away from the economic viewpoint of any matter. We hear everywhere the clarion call to reduce the budget, cut down expenses, eliminate the superfluous, economize, economize to the quick, and we grope about uncertain what expense can be eliminated and what expense is necessary.

Gentlemen, I suggest that we, the Medical Profession, sponsor, and sponsor energetically, the education of every parent in this land in eliminating needless childhood diseases—Preventive Medicine, if you please. Every physician should advise the prospective mother that proper diet and exercise and the pre-natal, natal and post-natal care of a physician warrant a good start in life for the child. He should advise that the child be immunized at a very early age against diphtheria, typhoid fever and smallpox, that the removal of diseased tonsils and adenoids is of prime importance, that the eyes and teeth should be examined and the defects remedied, and that special attention be given the diet at all times. When we advocate these measures strenuously and persistently then we are keeping faith with both clientele and profession.

The large insurance companies which represent the only major business of our nation that has not been seriously handicapped by the depression tell us that their periodic examinations of policy holders is the best investment they make. If their results in adults is so gratifying, surely we have a most promising field in Preventive Medicine in children.

There is a distinct relatonship between diseased children and crime. Go to our penitentiaries and find them filled with boys—underweight, undernourished, stoopshouldered, of impaired vitality, possessed of many defects that should have been remedied in childhood. It is an old, old cycle. The happy schoolboy gets behind in his school work. Because of infected tonsils, or adenoids, or eye strain, he becomes discouraged, then impudent, then insolent. He stops school to walk the streets, all the time his ambition waning day by day. Soon he is a petty thief, then we find him stealing cars for a thrill and alas, crime has another convert.

I contend that if we take care of the physical bodies of our children over a period of four decades—forty years—that crime will be reduced forty percent, delinquency in our youth sixty-five percent, the burden of paupers will be reduced fifty percent, and the stature of the American youth will be increased one inch. Truly, when crime, delinquency, pauperism, and preventable disease are costing our nation billions of dollars. We, the Medical Profession, should pledge ourselves, as physicians and as citizens, to put our shoulders to the wheel of the greatest means of reducing this expense—preventive medicine.

It is my hope that we shall not rest upon our laurels, but with the enthusiasm of those tireless medical workers who have studied and given us the benefit of their toil and brain we may go on, each day getting nearer and nearer to perfection in our approach and treatment of human disease, that we may warrant and deserve a deeper appreciation from the public; that each one of us may have a great hand in the relief of human suffering and the prolongation of human life; and that the world may be left healthier and happier by our having lived in it and sympathized with it.

I thank you.

Northeast Mississippi 13 County Medical Society Officers for 1933

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Prentiss—Dr. W. M. Adams ..... Booneville
Tishomingo—Dr. A. E. Bostick ..... Iuka
Chickasaw—Dr. A. F. Wicks ..... Okolona
Clay—Dr. S. R. Deanes ..... West Point
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Censor (3-year term) ..... Dr. W. H. Anderson
Councillor 3rd District ..... Dr. M. W. Robertson

Delegates

Delegates—County	Alternate
J. R. Hill—Alcorn	W. W. McRae
W. J. Aycock—Calhoun	B. J. Shaw
W. C. Walker—Chickasaw	V. B. Philpot
A. K. Naugle—Clay	J. E. Ellis
N. W. Nanney—Itawamba	S. L. Nabors
J. H. Green—Lee	L. C. Feemster, Jr.
C. E. Boyd—Monroe	James M. Acker, Jr.
J. D. Green—Noxubee	S. F. Hill
F. B. Long—Oktibehha	H. L. Scales
E. B. Burns—Pontotoc	O. F. Carr
R. B. Cunningham—Prentiss	None Selected
A. E. Bostick—Tishomingo	J. S. Wheeler
C. E. Lehmberg—Lowndes	None Selected

Tribute To Dr. Kirk

I have been asked and I have promised to write a brief account of my contacts with Dr. R. S. Kirk, together with my impressions derived therefrom. I find that to be a very difficult undertaking—not that there is but little I might say, but because there is so much I should like to say.

My acquaintance with Dr. Kirk began on the day when I came to Amory as a boy doctor. I found that he had preceded me as a resident physician, here, by a few years. In fact, he came when the town had its birth, so to speak. I soon recognized Dr. Kirk as a modest, unassuming man—making no effort at display and setting forth no claims for superiority either as a man or physician. This trait characterized him until the day of his death. Notwithstanding, his innate modesty, his was a most attractive and endearing personality. He was endowed with a great common sense and a keen but kindly wit that was amusing and pleasing. But above all, he had a heart that was open and responsive to all human needs and frailties. It was never written in the book of destiny that he should acquire wealth or affluence as the world estimates wealth, but it was ordained that he should be rich, indeed, in the love of innumerable friends. So, in sober reality, he lived and died, perhaps, the richest man who ever honored Amory with his life and labors. Who would not prefer to live and die as did he, in those respects, than to die possessed of uncounted wealth in dollars and yet be loved and mourned by few or none. It was said by a brilliant infidel when speaking of his own brother's life and, that if every person to whom he had done a single act of kindness, should bring to his grave a single rose petal, that he would sleep beneath a mountain of flowers that would perfume the air for miles around his tomb. How truly this might be said of Dr. Kirk. I trust that his family will pardon me when I say that it is a matter of common knowledge that he left them no heritage in money—in fact, I feel sure that it will require all that remains of his life's great work to meet the expense of his last illness, thus leaving his wife who was "faithful unto death" to him and his needs, with no visible means of support. How sad this is—how cruelly sad, while if each person to whom he ministered so faithfully, almost without hope or demand for reward would give a Single Dollar toward liquidating their indebtedness to him (to say nothing of expressing their love for him), all this expense would be amply cared for. To these delinquent, so called friends, I will say shame on you if you do it not. Again, I beg for pardon from his family for these remarks.

My personal contacts with Dr. Kirk have even been most pleasant. During all these years there

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has been no incident that led to an unkind word nor so far as I am aware, to an unkind thought between us. This is as it should be and it could not have been otherwise. While our friendship was not as that of David and Jonathan or Damon and Pythias, it was true and cordial. I shall always count myself fortunate that for many years I have known that he trusted and respected me. When he was "stricken unto death," he sent for me and while he realized that I could give him no relief—and I promised him none—I know that he appreciated my presence and interest. How my heart ached to know that I was powerless to serve in a scientific way and how my heart goes out in sympathy to his loved ones. May God bless and comfort them, and may his memory dwell for years as a benediction upon the town and people for whom he lived and labored. We may not see his like again for many years.

I am proud, indeed, to subscribe myself as his friend. G. S. BRYAN.

Cancer of the Stomach

BY J. SHELTON HORSLEY, M.D.

Deaths from cancer are increasing. There are now in the United States about 120,000 deaths from cancer each year, one-fourth to one-third of them being from cancer of the stomach.

In the fight against cancer, the most powerful of the captains of the men of death is cancer of the stomach.

Gastric cancer occurs more frequently in men than in women. Clinically it may be divided into two classes: (1) the kind of cancer that gives a history of indigestion, frequently resembling the history of peptic ulcer, for several years before the cancer becomes obvious; (2) the cancer of the stomach in which gastric symptoms appear only a few months before the disease is detected. The first type represents about 25 to 30 per cent of all gastric cancers. The second type comprises about 70 to 75 per cent of the gastric cancers.

Elsewhere in the body it seems to be true that cancer does not originate directly from normal healthy tissue. In regions that we can inspect, as the mouth, tongue, skin, rectum and lower sigmoid, cancer arises on a pre-existing benign lesion such as a patch of leukoplakia. a wart, a mole, an ulcer or a polyp-like growth. It is probable that cancer in the stomach follows this same general law. In the interior of the stomach, which cannot be saisfactorily inspected, benign growths or even ulcers may exist for years, especially if in the "silent areas" of the stomach, without creating symptoms until cancerous change and rapid growth have set in. The lesser curvature of the stomach, where gastric peristalsis begins, is the important motor region and about 80 per cent of all stomach complaints are due to interference with its peristalsis. A growth or lesion of any kind in the narrow pyloric end of the stomach may also cause symptoms because of partial obstruction. Roentgenologists say that any ulcer along the greater curvature of the stomach capable of demonstration by X-ray is practically always malignant, while many of the ulcers on the lesser curvature are benign.

It is generally recognized that some gastric cancers have their origin in benign peptic ulcers. The ratio of this incidence, however, is a subject of much dispute. It is true, too, that there is a low-grade cancer of the stomach which ulcerates early and cannot be distinguished grossly even at operation from a benign ulcer, microscopic examination being necessary to make a diagnosis. In the opinion of Holmes and Hampton, roentgenologists of the Massachusetts General Hospital, and of many gastroenterologists, the difficulty in differentiating between early cancer and peptic ulcer is so great as to call for surgical excision, the only known means of curing gastric cancer, unless the suspected lesion responds to medical treatment within a few weeks.

Because of the proximity of the liver and pancreas to the stomach and because, also, gastric cancers are usually not very radio-sensitive, efficient radiation treatment cannot be given gastric cancer, so the only means of cure is excision by partial gastrectomy. In some rare instances a total gastrectomy is justifiable.

If a patient reaches the "tropic of cancer," say 35 years of age, and begins to complain of vague symptoms of indigestion, such as belching, nausea, water-brash, heart-burn, sometimes vomiting, pain and discomfit in the upper abdomen, whether coming on at a regular time after meals or not, he should receive a careful examination by a competent general practitioner. In the majority of cases this stomach trouble will be found to be due to something other than a gastric lesion, and can be cured by appropriate medical measures. If, however, the patient is not relieved of his complaints after faithfully following the advised treatment for two or three weeks, his stomach and intestines should be examined with X-rays by someone fully competent to do this.

If cancer is found, an operation should be done as soon as possible by a surgeon of experience in gastric surgery. If the lesion appears to be a peptic ulcer, Medical treatment may be instituted for a few weeks; then, if improvement as noted by X-rays and clinically is not marked, the lesion should be removed by a partial gastrectomy.

If the patient has been having stomach symptoms for many years, and reaches the age of 35 years, the same routine should be enforced.

In the early stages of disease the diagnosis is difficult, but it is in the early stages that the diagnosis is important so that proper treatment can be given. It has been shown by Dr. Margaret Warwick that in about 23 per cent of cancers of the stomach coming to necropsy the cancer is still confined to the stomach, and that many of these deaths result from perforation of the cancer and peritonitis, and not from the constitutional effects of cancer. It seems probable that, if at necropsy 23 per cent of gastric cancers are still limited to the stomach, an earlier diagnosis and a proper operation would uncover a larger percentage of cases in which the cancer was confined to the stomach and could be cured by partial gastrectomy.

It is only by adopting some plan to follow through to a definite diagnosis and treatment the earliest signs of stomach trouble that the enormous mortality from gastric cancer can be reduced.

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New Books

Clinical Gynecology by C. Jeff Miller, Professor of Gynecology and Tulane University School of Medicine, Chief of the Department of Gynecology of Turo Infirmary, Senior Visiting Surgeon, Charity Hospital, New Orleans. This anxiously awaited book is being published by The C. V. Mosby Company, St. Louis. The price is ten dollars. The size, five hundred and sixty pages, large and well bound. His book covers malformations of the pelvis, infections and inflammations of the genital organs and urinary tract; injuries of the perineum, their prophylaxis and their treatment; malformations of the uterus, benign and malignant growths, their treatment, surgery, X-ray, radium, etc., disorders of function, dysmenorrhea and sterility, endocrine therapy, pre-operative and post-operative care. The "boys" know that when C. Jeff says it, it is that way. He says it well and to the point. He knows how to write a book that can be used. It is doubtful if any other man has ever written a book on this subject out of a more lucrative experience. He has been a tireless worker. He is a keen observer. He has the native ability. His book is a fountain source of the most dependable information that can be had on the subject. The information is in logical order and it is well said. You can practice by this book conveniently and safely. On gynecology, follow Dr. C. Jeff Miller and fear no evil. The history of all progress is largely the history of individuals who forged ahead, ones who saw and went forward. Any gynecologist, any practitioner, any general surgeon can ill afford to be without Dr. C. Jeff Miller's new book.

Scarcely have we found a non-medical book which we more like to have among the office collection for frequent use than this book by Lloyd Paul Stryker, "Courts and Doctors." And at no time, when the laity are more given to litigious proceedings than ever before, does the general practitioner need such an authentic legal adviser as this little handbook. For carefully and fully is it compiled that it might easily be substituted for your trusty counselor of the bar. To take up only one chapter in brief, the following suggestions are offered on avoiding being sued:

1. The best way to avoid a lawsuit is not to deserve one.
2. Be careful of your diagnosis.
3. Are you honestly competent to treat or operate for the malady which confronts you?
4. In all cases of surgery, consider carefully whether a surgical operation is required.
5. Make sure that all your instruments and appliances are of the most approved design and make, and are in proper working order.
6. Be careful in your choice of anaesthesias.
7. Keep careful records.
8. Do not work in the field of X-ray therapy and diatherapy unless you understand it. They are highly technical specialties.
9. Keep abreast of the times.
10. Be conservative of your prognosis.
11. Be tactful and just to your fellow practitioners.

"Courts and Doctors" is a publication of The McMillan Company. Price $2.00. New York City.

SPRING HILL, Miss.,—In the extreme western part of our school district on Henry Clanton's farm on Thursday, February 23, were born to Sherman Young and Annie Young, negroes, four babies, two boys and two girls. Three of them weighed 4 pounds each, the other 3½ pounds. They have been named Eva and Neva and Roy and Troy. All four babies are normal and healthy. The father is 28 years old, the mother 22. They have been married six years, have four children older than the quadruplets. This unusual natality has occasioned much interest and the humble negro home has had many visitors. The oldest citizens cannot remember another quadruplet case in the history of this section of Mississippi.—Ackerman Plaindealer.

"In savage tribes, where skulls are thick
And primal passions rage,
They have a system sure and quick
To cure the blight of age.
For when a native's youth has fled
And years have sapped his vim,
They simply knock him in the head
And put an end to him.

"But we in this enlightened age
Are built of sterner stuff;
And so we look with righteous rage
On deeds so harsh and rough.
For when a man grows old and gray
And weak and short of breath,
We simply take his job away
And let him starve to death."

Actual Practice in Surgical Technique

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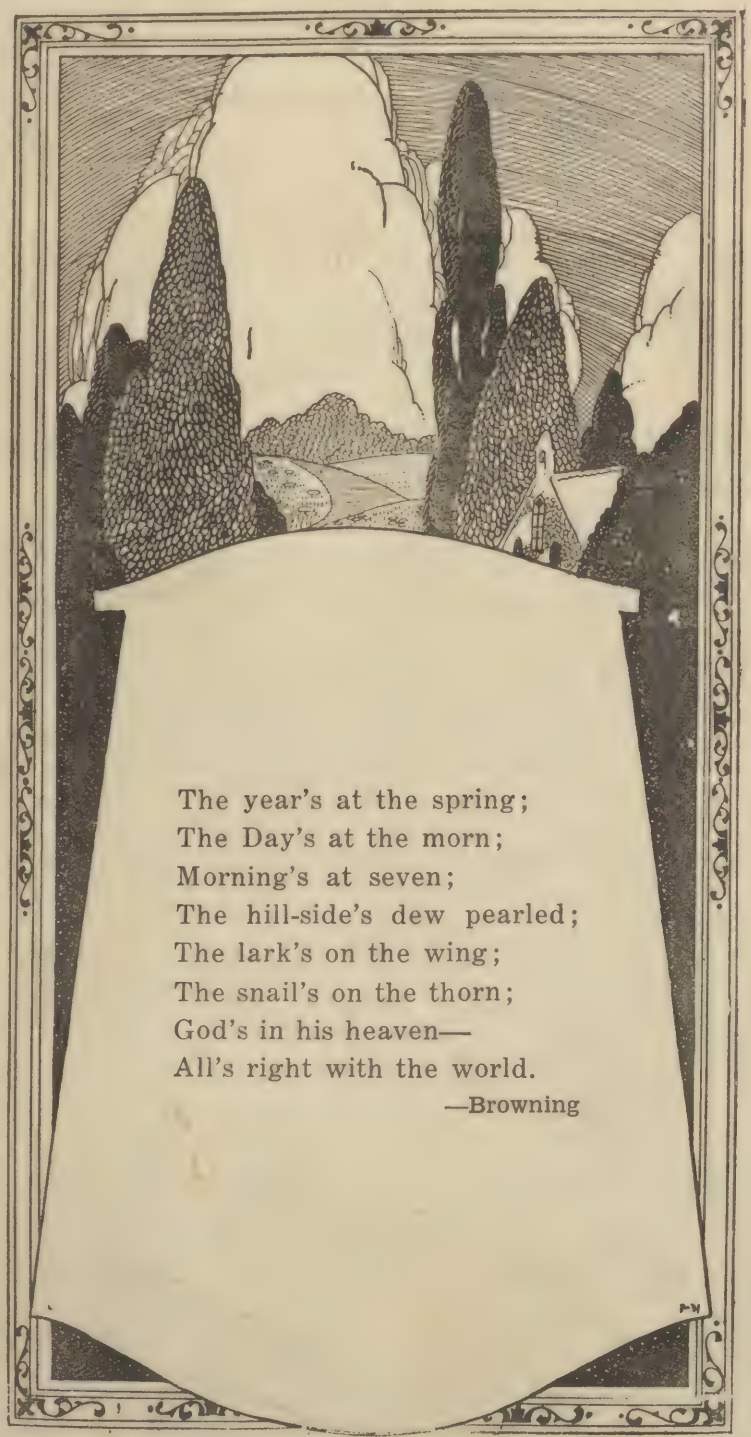
VOL. 10. BOONEVILLE, MISSISSIPPI, APRIL, 1933 NO. 11



The year's at the spring;
The Day's at the morn;
Morning's at seven;
The hill-side's dew pearled;
The lark's on the wing;
The snail's on the thorn;
God's in his heaven—
All's right with the world.

—Browning

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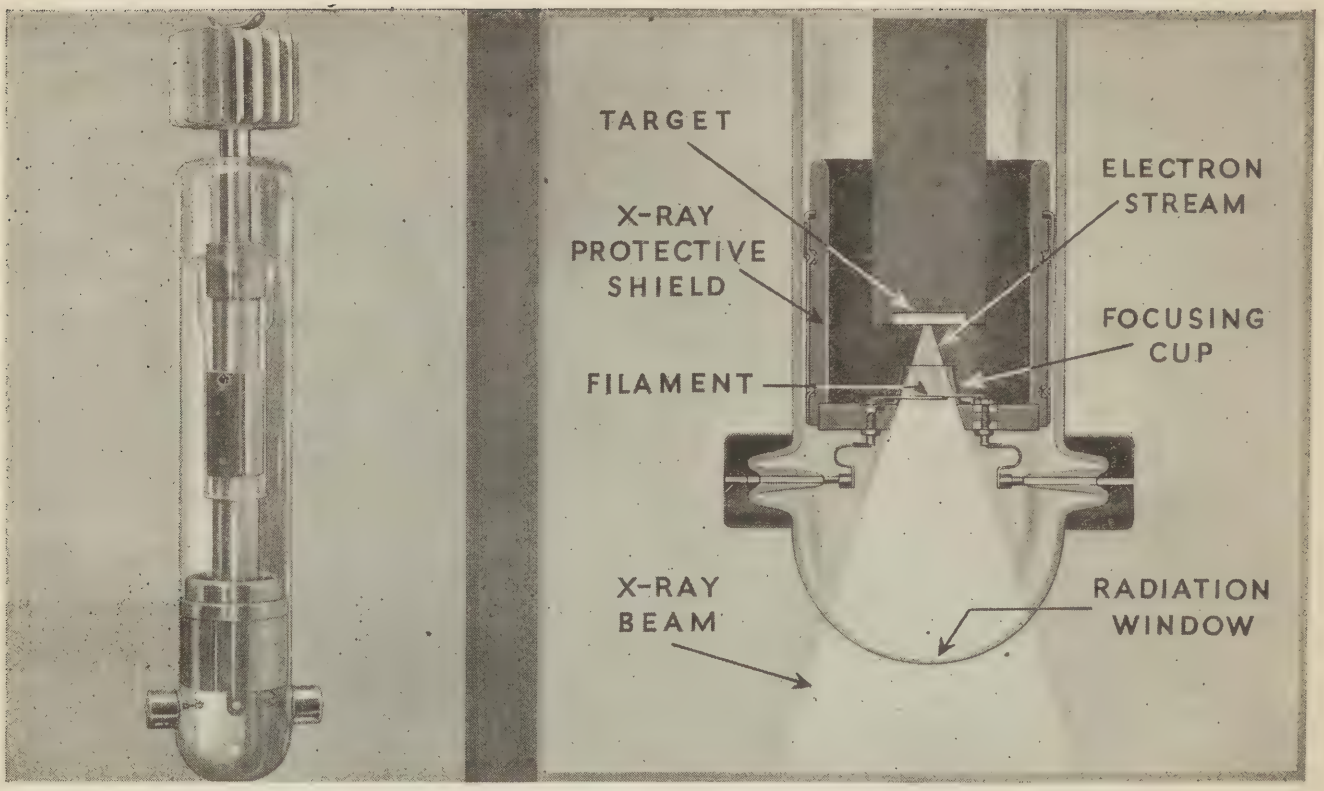

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MID-SOUTH POST GRADUATE MEDICAL ASSEMBLY

W. H. ANDERSON, M.D., Editor and Manager
MRS. W. H. ANDERSON, Assistant Editor

Entered as second-class matter, January 18, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

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We regret that we were unable to attend the first quarterly meeting of the North Mississippi Medical Society which met at New Albany on March 22. Its scientific program was fine. The "friendly city" of New Albany always makes the men glad they went. This is a splendid society. It is doing fine work. Dr. Brown of Water Valley is the new president. He is worthy and well qualified. Dr. A. H. Little of Oxford is the efficient secretary. He is always on the job for organized medicine.

No one thing is of minor importance in the practice of medicine. Let us do with our might what we find to do. Let us keep up the morale. Let us press forward. The medical profession, especially in the small town and rural community, has had it harder than any one. But it has wrought exceedingly well. It has not faltered. Let us be optimistic. Let us be brave. The opportunities for service are very great. Let us determine to do more work and do it better even if we have to do it for less.

The general practitioner, the general surgeon out on the firing line of the profession will have some patients every month who need to be sent to the base hospitals, to the real specialist. He should be alert enough to recognize these patients and he should be honest enough with his patient and with himself to send him. The practitioner in Sullivan Hollow may deserve as much credit as the specialist on Fifth Avenue. But they should join hands in co-operation for the good of the patient.

The Memphis Doctors and Mid-South territory have another treat coming about the middle of May. Look out for the program in the next issue of the journal.

President McGahey, of Calhoun City, does the noble thing by sending us a fresh crispy one spot for a year's subscription to a doctor in Birmingham. He has the vision. You can do no more for a doctor, relative or friend with one dollar than to send him the "journal." Now let about fifty or a hundred other good men do likewise. Dr. McGahey is actually doing the co-operative spirit in fine style. The doors of the subscription room are open, the price is very low, one dollar, and the best papers that can be written are in the press hopper. Get your friends on the mailing line as this man of deeds is doing.

If the community hospital is developed as it should be and as is being done in Mississippi, it will keep us away from state medicine. Our five state charity hospitals have rendered good service. It was all right to have them when we had but a half dozen or so surgeons in the state, but now when electric power has been extended to every cross roads and a good surgeon has or will follow, it is not time to hold out to an obsolete method. Let us put the old political foot balls on the shelf for the museum. When a very sick man has to go two hundred miles to a charity hospital and no way to go, it is a sad day because of the mental state of our law makers. The method outlined by the hospital committee would carry the service to the people at less cost everything

considered. The man who can not see this is mentally dumb as a door knob. It will aid the development of a little medical center in every county or every two or three. It will enable the medical profession to have post graduate work at home. It will take the politics out of our state aid. Fifteen cents per capita, three hundred thousand for the entire state will do the work quite well. Our five state institutions cost a hundred thousand dollars before even one patient is treated. It is time for a "new deal." A new deal the medical profession of Mississippi is going to have.

The X-ray and laboratory are fine aids to diagnosis, but they never will take the place of the medical and surgical ear that can hear the grass grow, the sun rise, the moon set, and the stars come out; an eye that can see the sap rise, the sun ray, the thoughts of man emenate, the mind of woman change, see the chemistry of digestion and the blending of the secretions of the ductless glands. And in addition the doctor needs to have the intuition of a rural mother, the medical knowledge of Pasteur, Matas, and Moynihan, the wisdom of Solomon, and the sympathy and the justice of the Healer of Nazareth.

Our hearts go out to Dr. Charlie B. Mitchell of Starkville in the loss of his wife. She was a true wife, a noble mother, and a constant inspiration to her family and to all with whom she came in contact. She was cultured and refined and broadly educated. Dr. C. B. Mitchell is one of the ablest and noblest in our society. Our society extends its hand of sympathy to him and the four fine sons.

You will read with much interest our University of Tennessee Department edited by I. S. Coe. We are glad to have this. It makes a nice addition to our journal. If you have some good news let him have it to send along. You will note from the young men listed in this news item that some of our biggest citizens and ablest educators believe in this university. Memphis is one of our greatest Southern cities and it has a fine medical atmosphere.

Be sure to read the resolution on the Ole Miss Medical Department passed by the North East Mississippi 13 County Medical Society at its last meeting. The two year medical course at Ole Miss is second to none in this country. It has stood the test. It has not faltered. It is still putting out this high grade work. Its graduates stand at the top in their junior and senior years in other schools. They make good records as internes. They distinguish themselves on state board examinations. They are resourceful in practice. A large per cent of them return to Mississippi. They are inspired with a vision. They catch the spirit. They are taught to work and to win by merit. They learn to do better with less means. They are resourceful in practice. This school is picking up the young men of limited means who are endowed with the professionad mind, the medical soul and the missionary heart and are given a chance to embark on the voyage of this great profession. Marble buildings with tile floors do not make a medical school. A teacher is the biggest asset of a medical school. We have too many doctors now, but not of the type this school turns out. We have a shortage of doctors in the rural communities and small towns. It may be because the medical schools have taught their students too much in terms of costly hospitals, operating rooms, internes and nurses, taught them away from the small town, from the general practice. It is time to teach the medical student to do more efficient work with less means. You can't turn a costly crank and put out a real doctor. Ole Miss medical school should be restored to its regular standing and should be given a glad hand and a God bless you for what it has done and is doing. It is no time to raise the requirement now. When it lags in its efficiency it will be time enough. Let us keep this school to teach others how to do better on less means. The destruction of this school is unjust, unfair and "uneconomical." It is time for our state medical profession to stiffen its back. It is time for our Governor and our board of trustees to show their interest and their loyalty. It is time for the naional medical council to be fair and to be sensible.

The first quarterly meeting of the North East Mississippi 13 County Medical Society met at Macon on March the 21st. This was our first meeting at Macon we believe. The Secretary asked that the banquet be left off and it was. But even so we met with a mighty clever bunch of doctors. They held out a cordial hand and was most generous in heart. They met and looked after the guests in fine style in every way. We are obligated to Dr. Hill for a full feed at a mighty nice cafe. The John Allen Hotel is one of the nicest we have seen in that size town. The town generally is up "to snuff." You could not keep from feeling the cordial atmosphere. The theatre furnished one of the nicest meeting places we have had. Our new president, Dr. McGahey presided in fine style, efficiently with ease and dignity. The program was unusually good. Dr. Scott of Birmingham, our visiting essayist, was up to the last word on "Infantile Paralysis." Young doctor Rayburn presented a classical paper on the attitude and concept of the profession. This was his first paper before our society. We welcome him and congratulate him. Dr. Lilly presented one of the ablest discourses we have ever had from a local man on his subject. Dr. McRae was not with us muchly to our regret. We took a liking to Macon and we believe we will be invited back. We shall be waiting to go.

FRACTURES

(An Editorial by Dr. Isidore Cohn)

The old conception that fractures are simple broken bones is rapidly disappearing.

It must not be overlooked that an injury of sufficient violence to produce a fracture must be great enough to produce soft tissue damage. The associated injury may and often does involve nerves, muscles and blood vessels. Failure to consider this fact results in many unnecessary and preventable disabilities.

One who undertakes to treat a fracture should carefully examine his patient and be prepared to treat associated injuries. The examination of the in-

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jured part should be done systematically. The history is of the greatest value. It is not only necessary to obtain how, but when the accident occurred. It is essential to know what functions have been lost. Loss of function when interpreted anatomically is of inestimable value.

Inspection enables one to note change in the axis of the limb, the altered attitude of the part, whether the patient voluntarily protects and supports the injured part, and many equally valuable points of information.

Palpation, which should be light, adds the next valuable link in the chain of evidence, localized pain.

Crepitus should not be sought for. Any movement which causes pain is harmful.

The X-ray should be utilized for confirmatory evidence and not as a substitute for a careful examination. Many fractures are overlooked by placing too great a dependence on X-ray examinations. This is particularly true in children. Until the epiphyses have ossified and union has taken place between the diaphysis and the epiphysis fracture through the epiphyseal line and fracture within the cartilaginous epiphysis will not be shown by X-ray examination.

It is important that the term epiphyseal separation should be discarded in favor of epiphyseal fracture. The term, separation, implies a loose contact, whereas in reality the condition that exists is a cartilaginous fusion. Unless the definition of a fracture as it is now accepted is discarded, then the term epiphyseal separation should be relegated to the limbo of oblivion.

In children the clinical examination plus a knowledge of the normal relationship of the epiphysis to its respective diaphysis is of more value than an effort to see a fracture line which cannot be demonstrated.

Careful examination and proper interpretation will enable one to avoid for the patient the sad results which follow when an unrecognized fracture has been passed over as a sprain. This term is too often a cloak for ignorance or indifference.

The diagnosis of a fracture once made calls for immediate treatment. There are fads and fancies in the management of fractures as in every thing else. Often times one finds that too much is done. Poor judgement is exercised in an effort to follow the dictates of authority. The simplest measures are often the best.

That method which has for its object the restoration of function through the application of anatomic knowledge along well established physical principles is best.

Operative measures are used all too often.

When operative surgery is applied due attention should be paid to the avoidance of unnecessary damage to muscle and nerves.

The splendid results which some of the masters of technic have reported have given many doctors an unwarranted impression of the ease with which such results can be duplicated. Many who are neither qualified by training nor environment pursue the operative plan of treatment to the ultimate harm of their patients. The bad end results thus obtained do not find their way into the literature.

Adequate diagnosis and early application of conservative methods of reduction and immobilization give satisfactory results in the vast majority of cases.

The end results are dependent largely on after care, provided adequate reduction has been accomplished. Pain following reduction and immobilization is indicative of incomplete reduction or a tight bandage. Neither of these can be relieved by drugs. The pernicious habit of ordering sedatives should be stopped. The part should be inspected. Loosening of the constriction will relieve many a pain and prevent that terrible complication known as Volkmann's ischemia.

Prolonged immobilization should be avoided as atrophy of bone, as well as the soft tissue, results.

The nutrition to the part should be kept up by early application of heat and active exercise.

The promiscuous use of various forms of physiotherapy cannot take the place of heat, well applied massage and graded active exercise.

Early diagnosis is essential. Immediate reduction under an anesthetic and well supervised after care will produce satisfactory results in the majority of cases.

The Revolution In The Treatment Of Pulmonary Tuberculosis*

BY DUANE M. CARR, M.D.

Rest is the specific treatment of all forms of tuberculosis. The involved lungs must be placed at rest while the patient's resistance is built up with the usual measures of good hygiene. Rest of both lungs is maintained to a degree by rest in bed as the physiological demands upon them are diminished. However, rest may be concentrated where it is most needed, in predominantly unilateral disease, with collapse therapy.

By means of collapse therapy the volume of a lung may be decreased to any desired extent. Healing takes place when fibrous scar tissue contracts about infected foci and when cavities are similarly obliterated. This contractile force is normally opposed in all directions by the relatively rigid bony cage and the strong muscle of the diaphragm since the intrapleural negative pressure forces the lung to fill the entire hemithorax. If spontaneous healing is to take place, the thoracic wall or the mediastinum must be pulled in or the diaphragm elevated. In a few minutes or a few days collapse therapy can accomplish this part of the process of healing which would otherwise require months or years.

The presence of a cavity feeding tubercle bacilli into the sputum is a constant menace to a patient, no matter how gratifying his clinical condition, because of the danger of a bronchogenic spread of the disease and because of the toxic absorption which so often leads to damage to other organs. All cavities must be closed before a patient can be said to be safely on the road to recovery.

Collapse therapy can be applied with benefit to at least 65% of all cases of pulmonary tuberculosis. Several sanatoria report its use in as high as 67% to 77% of all admitted cases. Cases discharged from one of them as "apparently arrested" have quadrupled since the beginning of collapse therapy five years ago. At the same time the death rate has been more than cut in half. With earlier application of collapse therapy and fewer patients reaching the "hopeless" stage, these figures will almost certainly improve. Not only has the prognosis been completely changed for a large group of patients, but the time required for arrest of the disease has been materially reduced. Earlier use of minor collapse measures will reduce the need for major measures which are costly both in time and money.

Phrenic nerve interruption (temporary or permanent) will reduce the volume of the hemithorax 400-800 cc. when the pleural space is free of adhesions. It will also stop 28,800 daily movments of the diaphragm which are normally transmitted throughout the entire lung. This combination affords rest and permits a great deal of scar tissue contraction without opposing resistance.

The unfavorable progress of a large number of incipient cases (20% at the Trudeau Sanatorium) un-

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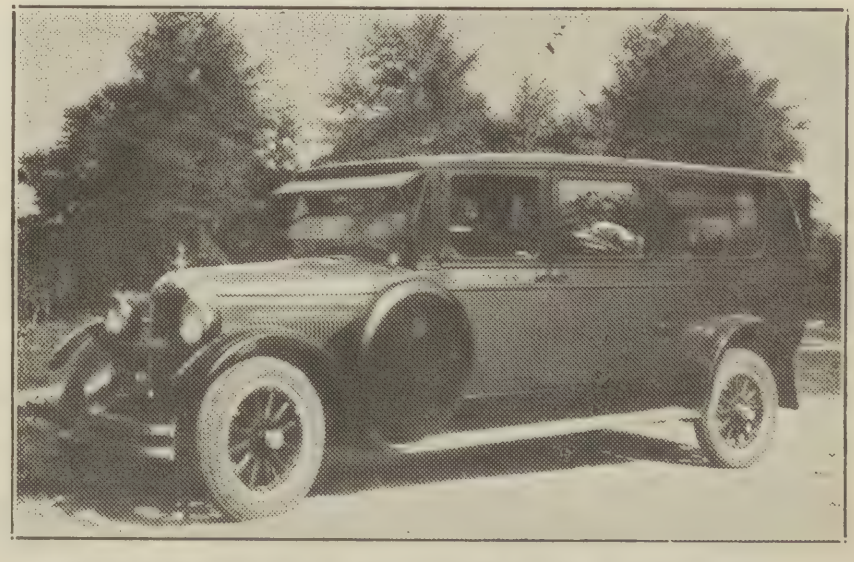

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der the best of sanatorium care justifies a rapidly extending use of this operation in early unilateral disease. Marked clinical improvement and closure of cavities often follows operation in chronic, moderately or far advanced cases in which pneumothorax or thoracoplasty are not contraindicated but in which phrenic interruption might be expected to accomplish the desired result. Dr. E. J. O'Brien reports closure of 90% of small multiple cavities, 59% of thin-walled round or oval cavities, and 7% of thick-walled irregular cavities following phrenic interruption . The effect of this procedure in checking hemoptysis places it in the category of emergency operations.

Phrenic nerve interruption should be used as a substitute for or a supplement to a pneumothorax which fails because of adhesions to give a satisfactory collapse. As a preliminary step to thoracoplasty, it often results in sufficient improvement in the patient's general condition so that a previously contraindicated operation may safely be performed. Lesions in the better lung may be so improved following temporary phrenic nerve paralysis that a thoracoplasty or other operation may be performed on the worse side. The contraction of an apparently healed lung is maintained and premanent protecting rest afforded by a phrenicectomy (permanent paralysis) performed before resumption of a normal active life. The operation is often used at the time of abandoming a successful pneumothorax so as to decrease the size of the hemithorax in which the scarred, healed lung must expand. In acute, highly febrile, progressive, predominantly caseous types of tuberculosis, phrenic nerve interruption is not often successful in checking the disease, but the few cases in which the temperature returns to normal, the sputum diminishes in amount, and signs of severe toxemia disappear a few days after the operation, make it a procedure worth trying.

A temporary phrenic nerve interruption (crushing of the nerve and resection of any accessories) is usually best in an adolescent or young adult whose lesion is of brief duration and in whom appearance of the disease in the opposite side is feared. The main trunk can readily be found at a second operation and resected if permanent paralysis is desirable when the diaphragm resumes its function.

The phrenic nerve is exposed through a small incision a finger's breadth above the clavicle with the sterno-cleido-mastoid muscle retracted medially. The phrenic nerve on the anterior scalene muscle is identified, the accessories arising from the brachial plexus are resected, after which the main trunk is either crushed (temporary) or resected for 2-3 cm. (permanent). This is a modification of the Goetze radical phrenicectomy. Exairesis, as described by Felix (1) (2), with its danger of tearing the subclavian vein or mediastinal pleura, is reserved for those cases in which no accessory phrenic nerve can be found.

Pneumothorax is almost ideal when the pleural space is free of adhesions and when extensive collapse and rest are desired, Rapid diminution of toxic symptoms and closure of all but the most rigid cavities may be expected following a well established pneumothorax. With the closure of cavities the sputum becomes negative to the most exacting tests

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and the danger of spread of infection into hitherto uninfected lung tissue greatly diminished. Clinical improvement is usually rapid.

The folly has been demonstrated of maintaining for month after month a partial pneumothorax which is ineffective because of adhesions. The adhesions must be divided with cautery if possible or the pneumothorax supplemented with phrenic nerve interruption or thoracoplasty.

Bilateral pneumothorax is not uncommon and may safely be applied when both lungs require collapse therapy. Not infrequently we have paralyzed the diaphragm on the side of a lesser lesion when the opposite lung was partly collapsed with pneumothorax with no sign of air hunger, and later increased the pneumothorax without causing distress.

Complications following artificial pneumothorax are few and, when handled with understanding, rarely fatal.

Intrapleural pneumolysis under thoracoscopic control (Jacobaeus) occasionally yields spectacular results. A lung which stubbornly refuses to collapse because of band or cord adhesions holding out the part of the lung most needing compression tends to fall away to a perfect collapse following cauterization of the offending adhesions. It is however, an operation requiring of the surgeon extensive training and experience because of the difficulties of orientation and of decision which adhesions may and which may not be safely cauterized without causing hemorrhage and a possibly fatal empyema.

Open intrapleural pneumolysis under direct vision and with the adhesions transilluminated is a safer procedure when there is any question of their being too short or containing vessels or "tents" of lung tissue. We frequently explore the pleural cavity with the thoracoscope to determine the advisability of cauterization by either method since it is a well known fact that the X-ray frequently fails to reveal the actual condition.

Severe complications in trained hands are rare. When fluid forms, as it frequently does, is must be aspirated and the pneumothorax continued lest adhesions form which are more extensive than before.

If a phrenic nerve operation and a pneumothorax have been undertaken and have failed to bring about healing of the lesions, the suitability of the patient for a scaleniectomy, an intercostal neurectomy, or an extrapleural pneumolysis should be considered before determining upon a thoracoplasty.

Scaleniectomy, the resection of portions of the three scalene muscles, reduces the rise and fall of the upper three ribs and, when combined with phrenicectomy, is used enthusiastically in some clinics to rest apical lesions and aid in the closure of thin-walled cavities lying high in the apex. The effect of scaleniectomy is difficult to ovaluate, since it is usually combined with phrenicectomy, but in our experience with about 15 patients, one case of hemoptysis was checked with scaleniectomy after phrenicectomy had previously been performed and his condition sufficiently improved to permit final closure of his cavity with a partial thoracoplasty.

Multiple intercostal neurectomy is the partial resection of the intercostal nerves near the rib angles. The paralysis may be made temporary by merely crushing the nerves. This operation practically abolishes movement of the thoracic wall. Although there is little collapse, the general unilateral rest distinctly helps healing of a diffuse, caseating lesion throughout one lung. We have used it successfully as an independent procedure and as a preparation for thoracoplasty. Its usefulness is limited.

Extrapleural pneumolysis is the freeing of the two adhered layers of pleura and underlying lung from the thoracic wall. Various materials have been used to maintain this separation of the adhered pleurae from the overlying ribs, but we favor the use of paraffin. Relaxation of the lung is obtained by gently stripping the parietal pleura from the ribs and intercostal bundles in the cleavage plane of the endothoracic fascia and filling the space between the parietal pleura and thoracic wall with a special paraffin mixture. Its best use is for local compression in the treatment of localized lesions containing a cavity high in the apex.

Extrapleural thoracoplasty must be considered not as a last resort, but in any predominantly unilateral, moderately or far advanced case in which pneumothorax is impossible or ineffective and which fails to make genuinely satisfactory progress with the lesser procedures that have just been described. When the patient's general condition warrants operation and the opposite lung is free of active tuberculosis, operation should not be delayed. So long as a cavity exists and there are tubercle bacilli in the sputum, there is danger of bronchogenic spread of the infection. When cavities are obliterated and toxic absorption diminished, tuberculous infection of the larynx, intestines, ect. often disappears and there frequently results a marked improvement in any lesions which may exist in the contralateral lung.

Any desired degree of collapse and rest may be obtained with a thoracoplasty. It must be performed in stages. It is advantageous to resect not fewer than the upper seven ribs so that the scapula may fall inward and act as a compressing pad. Only occasionally for very limited apical lesions should fewer than seven ribs be removed. A complete postero-lateral thoracoplasty consists of resection of the upper eleven ribs from the tips of the transverse processes laterally in varying lengths, depending upon the location and size of the diseased area to be compressed. If the cavities to be closed are large, the upper anterior rib stumps and cartilages must be removed to the sternum. Failure to close cavities with a thoracoplasty is usually due to failure to remove sufficient lengths of rib.

All forms of collapse therapy must be supplemented with the usual hygienic measures of a sanatorium regime. Any major surgery should be followed by six months or preferably a year in a sanatorium, during the latter part of which time gradually increasing exercise may be advantageously prescribed

The major operations in thoracic surgery now carry a lower mortality rate than do operations in major abdominal surgery. This has been brought about by greater understanding in the selection of operations for patients, the division of extensive procedures into stages, improved anesthesia, and the precautions taken to prevent stasis of infected secretions in the bronchi which cause postoperative pneu-

monia.

All the graded steps of collapse therapy are designed to produce rest concentrated where it is most needed and to assist the natural contraction of a healing lung. The earlier in the course of the disease that the proper collapse treatment is applied, the fewer advanced cases will there be requiring extensive operations and, even more importantly, will there be fewer patients in whom the disease has progressed so far that it is beyond human aid.

SUMMARY

1. Collapse therapy is an intensive application of the rest principle.

2. It reduces a lung's volume so that fibrous tissue may contract unhindered about lesions and cavities.

3. It can be applied with benefit to the majority of all cases of pulmonary tuberculosis.

4. It changes a hopeless to a hopeful prognosis in many patients and shortens their convalescence, an important economic factor.

5. Phrenic nerve interruption (temporary or permanent) is used alone when a moderate degree of rest and collapse is sufficient, and is used with other collapse measures to supplement their action.

6. Artificial pneumothorax is ideal for more extensive collapse when the pleural space is free of adhesions, but must be supplemented with other measures when ineffective.

7. Intrapleural pneumolysis (closed or open) is capable of converting certain incomplete pneumothoraces into satisfactory ones.

8. Varying degrees of pulmonary relaxation and rest will be obtained for special indications with scaleniectomy, multiple intercostal neurectomy, and various forms of extrapleural pneumolysis.

9. Thoracoplasty will produce any desired degree of collapse and rest but requires rigid selection of patients, expert performance of the operation, and meticulous attention to preoperative and postoperative details.

10. The mortality rate of major thoracic surgical operations is far less than that of the disease itself treated by the best sanatorium methods.

REFERENCES:

1. Felix, Willy; Anatomische, experimentelle und klinische Untersuchungen uber den Phrenikus und uber die Zwerchfellinnervation, Deutsch. Ztschr. f. Chir., 1922, 171, 283.

2. Alexander, John: Surgery of Pulmonary Tuberculosis, Lea & Febiger, 1925, 195-196. (Philadelphia.)

The Empyema Problem*

BY DUANE CARR, M.D.

In the last analysis the diganosis of a suspected empyema is made with the aspirating needle. When pus is present, it is usually most surely found in the middle of the dullest area, wherever this may be. When there is doubt as to whether the trouble is a posterior empyema or a basal pneumonia, it is well to remember that the lower thoracic spine is dull or flat to percussion in empyema and resonant in pneumonia.

Aspiration of fluid from the pleural cavity that is found by smear or culture to contain pyogenic organisms calls for a definite course of active treatment. If the history indicates that the empyema is younger than two weeks (three weeks in thin streptococcus fluid) or if the aspirated fluid is thinner than skimmed milk, it is probable that firm pleural adhesions have not yet formed.

Open drainage under such conditions and upon a patient whose vital capacity is probably low by virtue of a recent pneumonia or other grave pulmonary disease may cause collapse of both lungs and suffocation of the patient. The in-rushing and out-rushing of air through the drainage tube, in the presence of a mobile mediastinum, may so disturb the heart and great vessels that cardio-circulatory failure will contribute toward an early death through anoxemia. These matters have been ably discussed by Graham and Bell (1).

Open drainage during the early days of an acute empyema may not kill the patient if his reserve muscular strength is sufficient to overcome the dangers that have just been referred to. If he survives, and if the pleural adhesions that the empyema had begun to form between the lungs and the parietal pleura were not yet sufficiently strong to withstand rupture by the inrushing air, the entire lung will collapse toward its hilum and a total empyema of one pleural cavity, with a grave ultimate prognosis, will result in place of the restricted one that existed before drainage was performed.

Until open drainage becomes safe by virtue of the formation of pleural adhesions strong enough to keep the lung from collapsing and the mediastinum from "fluttering" from side to side with respiration, either needle aspirations or closed drainage must be performed to relieve the patient of the presence of the large amount of toxic material contained within the empyemic fluid and to relieve his heart and the respiratory surface of his lungs from pressure that can eventually stop the function of both the heart and lungs.

Air-tight drainage is ideal for the period before open drainage becomes safe but the usual method of introducing a catheter between the ribs does not result in true airtightness for more than three or four days and the subsequent sucking of air around the tube has the same (or through the trapping of air within the empyemic cavity a worse) effect upon the patient as a too early open drainage. The air tight system that we use (Alexander [2]) is effective but it requires a sure technic for safety. The far more complicated method of Deryl Hart (3) is said also to be effectively air-tight. For occasional use, I feel that repeated aspirations are preferable, because safe and effective, to air-tight drainage.

When aspirating, care should be taken that no air is sucked into the pleural cavity. The amount that should be aspirated depends on the amount of fluid and upon the patient's reaction. If dyspnoeia, pain, marked increase in the pulse rate, or cough should occur, aspiration must be promptly stopped

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and, if the symptoms are severe, 50, 100 cc, or more of air should be introduced into the pleural cavity through the needle so as to allow the lung and mediastinum to return somewhat toward its pre-aspiration position. As a general rule, not more than 500 cc. should be removed at one sitting. When huge amounts of fluid are present, it may be well to aspirate once or twice a day for one or two days and then daily until most of the fluid has been removed and the lung expanded. Thereafter, aspiration every two, three or four days should be enough. I do not favor the introduction of air to replace in part the aspirated fluid as a therapeutic method for the reason that when this fails to cure the empyema, a total empyema of the hemithorax remains which has a very bad ultimate prognosis. Nor do I favor attempting to cure the empyema by indefinitely repeated aspirations during one, two, or three months. This will cure some patients, but during the treatment the patient is being damaged by varying degrees of dangerous toxic absorption; those who are not cured are left with a chronic empyema.

Open tube drainage should succeed the temporary period of aspiration as soon as the criteria for probably firm adhesions are manifest. Probably nothing in the treatment of empyema is more important than the way in which open drainage is performed and maintained. A piece of a rib and the underlying thickened pleura (which should be routinely examined microscopically for tuberculosis) should be resected and a drainage tube, not smaller than one's forefinger and having a large lumen, introduced so that its inner end protrudes not much more or less than 2 cm. within the empyemic cavity. Along side of it a small catheter or a long, fine tube of any sort should be introduced well into the empyemic cavity and the two tubes anchored firmly to the skin with a safety pin and adhesive straps—not merely with adhesive straps. The smaller tube is an important addition for the introduction of antiseptic solution irrigations every two, four, or six hours. If these are made directly into the drainage tube, the empyema is distended and a fatal air embolus may result and the new fibrous tissue that is pulling the lung out to the thoracic wall so as to obliterate the empyema will be broken up. If there is no broncho-pleural fistula, the patient should lie on his unoperated side with his hips raised on pillows, just before the solution is introduced and for fifteen minutes thereafter so as to give the antiseptic a chance to kill the organisms on the walls of the cavity.

It is of supreme importance that the tubes be placed at the absolute bottom of the cavity, not even one inch above the bottom. Failure to observe this rule is responsible for many a chronic empyema needlessly resulting from a sub-acute one. The simplest way of determining the bottom of the empyema before the incision is made for drainage is to aspirate with a syringe and needle in each intercostal space from below upward until pus is found. The posterior axillary line, and not the mid or anterior axillary line, is the best position for drainage of the great majority of empyemas. Tubes placed here do not keep the patient from lying on his back. If placed farther forward, the posterior part of the cavity will not drain when the patient assumes the natural position of lying on his back.

The huge majority of empyemas will become completely cured by expansion of the lung and obliteration of the cavity if the tubes are placed as suggested and maintained in position for as many weeks or months as may be necessary for complete obliteration of the empyema. Obliteration may be tested for by temporarily removing the tubes and gently sounding with a curved uterine sound or, if a remaining sinus is inaccessible to the sound it may be filled with lipiodol and a roentgenogram taken. A useful method of recording progress toward obliteration is to measure, at intervals, the amount of antiseptic fluid that the cavity will hold, the patient being placed on his unoperated side and with his hips raised so that the drainage tube is at the highest point of the empyema cavity.

The proceduce that has been outlined will allow the development of but few chronic empyemas. Chronicity is occasionally caused by the presence of a broncho-pleural fistula, tuberculous infection of the pleura, a lost rubber tube in the pleural cavity, osteomyelitis of a rib, or by other rarer causes.

When a patient presents himself with an empyema already in the chronic stage, it will usually be found that drainage is ineffective because there is only a small sinus without a tube. Even if a tube is in place, it will probably be found to be too narrow for adequate drainage, to be unaccompanied by a second tube for antiseptic irrigations, and not to have been placed at the very bottom of the empyemic cavity. It is, therefore, likely that a new operation is necessary to place a proper pair of tubes in the proper position. At this time a section of the parietal pleural scar should be examined microscopically to determine whether or not tubercles are present.

Even though this re-drained empyema may be many months old, the chances are hugely in favor of adequate drainage resulting in great decrease and perhaps total closure of the cavity. Drainage and irrigations should be maintained for as many months as measurements of the cavity show that it is progressively decreasing. As with tube drainage of any empyema, the patient must be carefully instructed when he leaves the hospital for home treatment that the tubes must be kept in exactly the position in which they then are and that if they should become displaced or come out that they must be replaced in the exact position within 24 hours so as to prevent the rapid contracture of the sinus which often prevents reintroduction of tubes of adequate size. It is true that removal of the tubes as soon as the discharge from the cavity becomes scanty and the organisms few results in some cases in closure of the draining sinus and spontaneous re-expansion of the lung, but in many patients this procedure will result after some weeks or months in reaccumulation of the pus and recurrence of the empyema, which then demands a new drainage operation.

If measurements show that the cavity has ceased contracting, one of two things must be done to close the cavity. Either the lung must be made to come out to meet the thoracic wall or the wall must be made to move in to come in direct contact with the collapsed lung. The first object may be attained in some cases by widely opening the empyemic cavity and

stripping the scar from the surface of the lung—the so-called Delorme-Fowler decortication operation. In many patients a line of cleavage for the stripping cannot be found and even if the decortication can be completed the lung may refuse to expand to meet the thoracic wall.

In order to make it possible for the thoracic wall to fall in, the ribs overlying the empyema and, for a technical reason, those portions of the ribs that border upon the limits of the cavity must be removed. This operation is the Estlander extrapleural thoracoplasty. Almost always it results in a considerable decrease in the size of the cavity but if the parietal pleural scar is old, dense, and thick, this may hold out the thoracic wall in much the same way as the ribs had. If this proves to be the case and, after waiting for several months for the cavity to decrease in size as much as it will, the thick parietal pleural scar together with the intercostal bundles and costal periosteum is removed completely from over the residual cavity. This is called a Schede thoracoplasty and properly includes resection of both the ribs and th soft part just mentioned. The rigid flat scapula may roof over a high empyemic cavity after a Schede thoracoplasty and prevent it from becoming obliterated. So as to obviate this, it is well to plan the original thoracoplasty incision in the postero-lateral muscles of the thorax and loin so that a large apron of muscle will be left attached to the scapula, which muscle may be loosened from the skin and rolled up under the scapula and anchored to the top of the cavity so as to fill it. This is a very effective way of closing a broncho-pleural fistula.

Both the Estlander and the Schede thoracoplasty are shocking operations for patients who have been weakened by many months or even years of chronic suppuration and it is therefore necessary that great care be taken with the preoperative preparation of the patient and that he be transfused if quite anemic. It is especially important that the operation be divided into three, four, five or as many more stages as are necessary to make the operation safe for the particular patient. By observing the many precautions that are necessary and by taking advantage of the modern technical improvements in thoracoplasty, these operations are not only safe but result in a very high percentage of cures.

TUBERCULOUS EMPYEMA

A tuberculous empyema that is not secondarily infected with pyogenic organisms must never be drained in any other way than with a needle. Many patients' lives can be saved by their doctors' refusing to put tubes into such empyemas, no matter how febrile the patient may be nor how thick and ugly the aspirated pus.

The simplest rule for the tentative diagnosis of a pure tuberculous empyema (in contradistinction to a mixed tuberculous and pyogenic empyema) is that it must be assumed to be a pure tuberculous one if smear or culture of the aspirated pus fails to reveal pyogenic organisms. As tubercle bacilli are difficult to demonstrate by smear, culture or even by guinea pig inoculation in some cases, failure to find them must not be used as evidence that the empyema is not tuberculous. Also, an empyema in the presence of known pulmonary tuberculosis should be assumed

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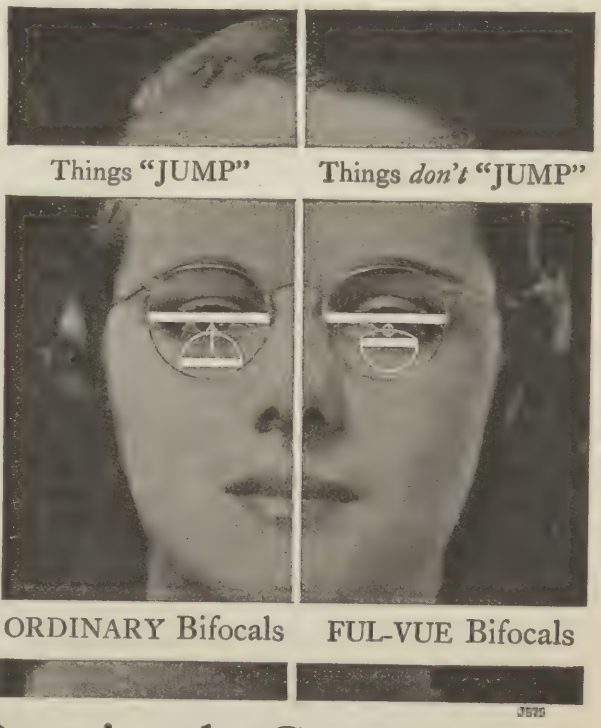

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to be tuberculous.

A serous tuberculous effusion should be left alone for several months if it is not causing harmful pressure symptoms. If at the end of that time it has not showed signs of spontaneous absorption, it should be kept dry by aspiration and, if tuberculous disease within the lung makes continuing collapse of the lung desirable, the aspirated fluid should be replaced by filtered air. If the lung does not require continuing collapse, an effort should be made to get it to expand.

If this procedure does not result in absorption but in a gradual thickening of the pus, it may be wise to perform an extensive staged extrapleural thoracoplasty in order to obliterate the empyema before it becomes infected with pyogenic organisms, perhaps as a result of rupture of the pus into the lung or externally through the thoracic wall.

If at any time a tuberculous empyema is found to be infected with pyogenic organisms, it should be treated in approximately the same way as a non-tuberculous empyema would be treated. In this group, however, it is well to make a brief attempt to sterilize the cavity with repeated aspirations and lavages with antiseptics if the infection is mild. If tube drainage should become indicated, as it usually does, it is best first to use air-tight drainage (even though the empyema may not be of recent onset) which may be converted into the more adequate open drainage if the former proves to be inadequate to keep the patient free of toxic symptoms.

A mixed tuberculous empyema with open drainage is considerably less likely to become obliterated by expansion of the lung than is a non-tuberculous empyema. For this reason, an Estlander thoracoplasty usually becomes necessary and should be performed as soon as the patient becomes a suitable operative risk following open drainage. It is frequently necessary to obliterate the residual cavity with a small Schede thoracoplasty, perhaps with the addition of a pedicled muscular graft.

The treatment that has been outlined will completely cure large numbers of tuberculous empyemas and the disease is no longer the hopeless one that it was considered to be only a relatively few years ago when surgery was not used until the patient's condition was practically hopeless.

SUMMARY

1. An acute empyema should not be drained with a tube until thickening of the aspirated pus indicates that the pleural adhesions have become sufficiently firm to resist rupture when they are exposed to atmospheric air pressure through an open drainage tube.

2. Aspirations, repeated according to the demands, should be carried out from the time of first diagnosis, to relieve the patients of the symptoms of toxic absorption and pressure upon the lungs and heart.

3. When open drainage becomes presumably safe, a section of rib should be removed in the posterior axillary line at the lowest point at which pus can be aspirated, which should be at the very bottom of the empyemic cavity.

4. Into this opening should be anchored a finger-sized drainage tube with a large internal diameter,

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not merely a catheter. Beside it should be placed a small catheter or other small tube in order to carry the antiseptic irrigating solution.

5. These tubes should be retained in place until careful soundings or lipiodol roentgenograms show that the cavity has become completely obliterated by expansion of the lung until it meets and adheres to the thoracic wall, or until the physician is satisfied that this usual outcome will not take place.

6. If prolonged simple drainage with antiseptic irrigations cannot close the cavity, the lung must be brought out to the thoracic wall by a pulmonary decortication operation or the thoracic wall must be dropped in upon the lung by either an Estlander or a Schede thoracoplasty, or both.

7. A pure tuberculous empyema should never be drained with a tuble.

8. An empyema must be assumed to be tuberculous if pyogenic organisms cannot be found in the aspirated fluid by smear or culture.

9. If a pure tuberculous empyema will not dry up after repeated aspirations, an extrapleural thoracoplasty should be considered.

10. If a tuberculous empyema becomes infected with pyogenic organisms a brief attempt may be made to sterilize it by aspirations and antiseptic irrigations, but if these fail, as they usually will, closed drainage should be performed and this should be succeeded by open drainage if the former proves to be inadequate.

11. The majority of openly drained mixed infected tuberculous empyemas eventually require an Estlander or Schede thoracoplasty, or both.

12. The scheme of management that has been outlined requires minute attention to detail which is rewarded by excellent results in the overwhelming majority of cases.

REFERENCES:

1. Graham, E. A., and Bell, R. D.; Open pneumothorax: Its relation to the Treatment of Empyema, Am. Jour. Med. Sci., Dec. 1918, 156, 839-871.

2. Alexander, John; Air-tight Intercostal Drainage of Acute Empyema, Jour. A. M. A., 1929, 92, 1818-1821.

3. Hart, Deryl; Empyema: Treatment by Tidal Irrigation and Suction, Arch. Surg., 1929, 19, 1732-1765.

Prenatal Program as a Routine Procedure of a County Health Department*

BY NORRIS C. KNIGHT, B.S.M.D.

I

In this paper it is my purpose to show that a Prenatal Program as a Routine Procedure of a County Health Department is practical, well worth-while, valuable to obstetrician, midwife, health worker, and the community as a whole, that it should be one of the major activities of any health department, and if prenatal patients are not receiving prenatal care from the practicing physicians the responsibility devolves upon the health unit; and also that prenatal care is a major problem confronting the health workers and medical profession of every county and city in the United States today. In the following paragraphs the term Infant Care is frequently referred to in connection with prenatal care. This is because these two fields, in my opinion, overlap and go hand in hand. In doing prenatal care we are also doing infant care because it is my idea that infant care should at least begin at the time the mother becomes pregnant.

The primary function of a health department, the primary reason for its establishment and inclusion in the body politic was and still is the control of communicable diseases. In defining problems confronting the health department the communicable disease problem rightly holds first place. I think it will be admitted without argument, however, that any county health department should have a balanced program; and as a corollary to this proposition it may be stated that the smaller the unit the more necessary the balance. In considering the essential activities which go to make up this program the subject assigned to me for discussion most certainly has a prominent place. Any county health unit that does not carry on a Prenatal Program as one of its major activities is carrying on an unbalanced and a defective program. By this I do not mean to say that a county health unit should make prenatal care a continuous and persistent feature, although to obtain results in prenatal care it is necessary to put forth continuous and untiring efforts always. It is usually unwise to confine concentration and effort to a single phase of health work for too long a period. The people become tired of being educated too persistently on one subject. They like an occasional change of topic.

It is my belief that the prenatal program has been neglected by some health departments. I think that in some departments the prenatal care has been left up to the nursing staff, and has been done more or less by home visiting methods. Recent investigations have conclusively revealed that where prenatal care is left up to the nursing division, and where it has been done by home visiting methods, it has proven very inadequate and ineffective and does not bring about the desired results. In other words, unless a medical examination, blood pressure, urinalysis, etc. is done by a physician the prenatal program does not achieve the desired results. Please understand that this is no reflection whatever on the public health nurse. She cannot be expected to do the work of a physician.

Prenatal care is a universal problem. It makes its appeal in every community and in almost every home. The methods to be employed have been evolved as an outgrowth of successful experience and it has been demonstrated that they can be employed successfully by county health units. Results of thorough work will be reflected in the mortality statistics as promptly as in most other activities, or perhaps more promptly.

Unfortunately all the people cannot be thoroughly educated overnight with regard to any public health procedure. Moreover, even after they are convinced of the wisdom of changing customs and habits, much

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time is consumed before the improved practices become general and the results are registered in the mortality tables. Notwithstanding these difficulties the prenatal program offers many advantages as a feature for a local health unit around which the other activities can be built. This is universally recognized now as being among our most important problems and will be supported by the public as readily and for as long periods as will any of the routine procedures of a health department, but even in featuring this subject the best interests of public health will not be served unless, at the same time, other activities generally expected of the health department receive due attention. The featuring of any important health problem by a county health unit has been demonstrated to be practicable and advantageous. This, of course, presupposes that effective, clear cut procedures will be employed and tangible results be forthcoming with reasonable promptness. An impressive result thus obtained will create public confidence which, in turn, will enable the health workers to stress other important problems in an orderly manner, and will aid in securing adequate appropriations for the department.

II

The question which, I am sure, is uppermost in the mind of many health officers as well as myself, is whether prenatal care should be left to the field of clinical medicine or to the field of preventive medicine and public health. There is some diversity of opinion on this question. I think that the sincere health worker should not be interested so much in who does the work as in the result obtained. Personally, as a health worker, I do not propose to undertake any activity that is generally recognized as belonging to the field of clinical medicine. The practice of medicine should be entirely the province of the practicing physician, and he should consider it a part of his duties to practice preventive medicine, as well as curative medicine, among his patients. In cooperating with the practicing physician and in attending to general public health duties which cannot be expected of practitioners of medicine, the health officer will be fully occupied. If the medical profession will proceed to provide proper prenatal and infant care, which will undoubtedly reduce our excessively high maternal and infant death rate, then the health officer should co-operate as far as practicable. If reasonable progress is being made by physicians along this line, or is in prospect, the health officer should devote attention to other important duties, of which there are more than enough to take up all of his time. If the medical profession—in spite of cooperation offered by the health department—cannot or will not do the work necessary to save the lives and health of women in the childbearing stage, then the problem becomes a charge upon the health department, and the health department is justified in following the next logical step, which is obvious.

It seems to me unnecessary and unwise for the health worker and the physician to engage in controversy. There is more than enough work for all. A fair and reasonable basis for getting the work done should be established, common ground should be found, and co-operation and good will should prevail. Any other course will prove very costly to all parties concerned, as the cause of public health will suffer. The introduction of a controversial question in this discussion is not in order. I mention it here because my subject is devoted to prenatal care as a permanent and major activity in the program of a county health department.

III

Health departments everywhere attempt to put over an active educational program. As the public becomes educated to better health methods in general they are demanding better health supervision for the expectant mothers of our country. The public is confronting the medical profession with the question "Why don't you do something about it?" We should not wait until the public demands this of us; we should present it to them.

Let us take a look at our present maternal and infant mortality rates, which reveal to us another outstanding demand for prenatal care. A satisfactory method for translating health activities promptly into tangible evidence of health conservation has not yet been developed. The mortality records are reasonably complete so they afford about the only universal basis for measuring the results. At the same time this means of measurement is far from satisfactory because it will not reflect promptly and definitely many activities that we know to be valuable.

The maternal death rate of the United States is appalling. We must face the facts that the United States lags behind the civilized world in the prevention of maternal deaths. According to Doctor Fred L. Adair, Chairman of the Committee on Prenatal and Maternal Care, of the White House Conference, in his bulletin issued in August, 1931 "Three-fourths of the maternal deaths in the United States are due to preventable causes." The birth registration area was established in 1915. At that time the maternal mortality rate for the United States was 6.7 per 1,000 live births. Today it is just the same. Since the advent of the health department we have witnessed astounding decreases in the incidence of typhoid, diphtheria, smallpox, and other communicable diseases. But have we seen our maternal mortality rate lowered? Most emphatically not. Today it is practically the same as it was fifteen years ago. There have been fluctuations in our maternal mortality rate during the last few years, but it has been upward, not down. This may be because prenatal care, as practiced by our health departments, is new and has not yet had time to show itself in the mortality tables.

Prenatal care entered the field of Public Health only a few years ago. Before 1921 no state health department in the United States included prenatal care in its program. At that time the Maternity and Infancy Act was passed by Congress, and the state health departments began to recognize that it really was an important problem. Mississippi, I believe, was one of the first states to take advantage of this Act.

Infant mortality rates, on the other hand, have seemingly responded to the efforts put forth to lower them. In 1910 about twenty per cent of the total deaths in the United States occurred among infants. The decline of this percentage to approximately eleven per cent in 1931 represents actual achievement.

Each year about 2,500,000 babies are born in the United States. The cost of about 17,000 of these babies

must be reckoned in terms of their mother's lives. That is, each year, about 17,000 women die in our country giving birth to babies. This is the annual casualty record in the army of American mothers which has been in a state of mobilization continuously during the one hundred and fifty odd years of our country's existence. The women of this army are continually risking their lives and have kept on giving birth to the Nation itself. In the last and most disastrous war the world has ever known 50,604 men lost their lives. Besides these 50,604 battle deaths should be placed the less romantic but no less heroic deaths of women from causes related to childbirth in the same number of years. Not merely for a short period, but every day in every year death takes its toll from the ranks of American motherhood.

We should all stop and consider the question "What is the cause of our high maternal mortality rate, and what part of it is preventable?" I am sure we are all familiar with the causes of maternal deaths and I feel safe in saying that two-thirds of these deaths could be prevented by proper prenatal care. In other words, at least 10,000 of the 17,000 women who lose their lives annually in the United States from causes related to childbirth, could be saved if provided with proper prenatal care.

Let us consider, for a moment, our stillbirth problem, which is a sadly neglected problem in the subject under discussion. The Bureau of the Census has been collecting information concerning the incidence of stillbirths only since 1922. Data concerning infants who have no postnatal life are most inaccurate because of the varying rules and regulations existing in different states in regard to reporting such cases, and because of incomplete reports made by the doctor, midwife, or parents. However, the data available indicate that during the last eight years there has been no material reduction in our stillbirth rate. This data also indicates that the three greatest causes of stillbirths are complications of labor, syphilis, and the toxemias of pregnancy—the greater percentage of which are preventable by prenatal care. Of these three causes the one which probably concerns us most here in Mississippi is that of syphilis, because of our large negro population. Statistics reveal the fact that at least 24% of the patients attending prenatal clinics of the Sunflower County Health Department have syphilis. Most of these patients are apparently healthy and well, and without the routine Wassermann the disease would not be discovered. If no treatment is given probably one-half of these pregnancies terminate in abortions, miscarriages, or stillbirths, and probably one-half of those born alive die within their first year of life. The remainder join the ranks of congenital syphilitics in the community—defective, miserable, children who constitute the greatest tragedy of syphilis. If suitable anti-luetic, treatment is given to the syphilitic woman early in pregnancy, and continued until delivery, we know that in the great majority of cases

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we can assure the mother of a live baby free from syphilis. The problem of securing treatment for these patients is an unsolved problem facing the medical profession at this time. Certainly some means of providing this treatment could and should be worked out. Surely no health problem offers such an opportunity and such a challenge to public health workers and the medical profession today. The means of preventing congenital syphilis are at hand; we now face the problem of application of medical methods tested and proved.

Before leaving the stillbirth problem I wish to emphasize the first and most essential step in preventing stillbirths and congenital syphilis; namely, a routine examination for syphilis, including Wassermann, on every prenatal patient.

IV

The results obtained from a prenatal program are directly indicative of the quality of work done by health personnel laboring in the field. Some of the results that can be expected from a thorough prenatal program carried on by a health department are as follows:

A. A lowering of the maternal and infant mortality rate in that county.

B. A prompt lowering of the stillbirth rate.

C. An increase in the number of normal labors and normal pregnancies.

D. Removal of much anxiety, dread, discomfort, and suffering on the part of the patient both prior to confinement and during delivery.

E. The early and much more satisfactory and effective treatment that can be given to the complications of pregnancy such as toxemia, syphilis, heart and kidney disease, etc.

F. A healthier, happier, and better educated county of mothers and children.

G. The winning of the confidence and favor of the people of the county which is necessary to put any health department on a firm basis and which in turn will enable health workers to stress other important phases of health work.

I wish to take up just a few minutes of your time to outline briefly the program of prenatal care as carried on by the Sunflower County Health Department, and the results obtained therefrom, which serves to illustrate that a Prenatal Program as a Routine Procedure of a County Health Department is practical, valuable, and well worth-while.

As you probably all know, the Rockefeller Foundation Training Station at Indianola was operated in connection with the Sunflower County Health Department from July 1, 1927 to July 1, 1932, at which time it ceased operating. In 1928 Doctor Janney, Director of the Training Station and County Health Officer, realizing the need and demand for prenatal care in the county appeared before each midwife club in the county and explained to them the advantage of a prenatal clinic and informed them that such a clinic was to be started at Indianola and that they (the midwives) were to explain it to all prenatal patients and encourage them to attend the clinic. Doctor Janney also explained it to the medical profession in the county and ever since the clinics were started

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many practicing physicians have referred their cases to the clinics for prenatal care, realizing the advantages to them. The midwives worked hard, explaining to their patients what attending the clinics would mean to them and encouraging them to attend, and much of the credit for the success of the clinics rightly belongs to the midwives. The nurses of the health department also started home visiting to prenatal and postpartum patients, explaining to them the purpose of the clinics and encouraging them to attend.

As time passed prenatal patients applied to the Indianola clinic for care in increasing numbers and a clinic was inaugurated at Ruleville, twenty-six miles away, soon thereafter. At these two places, clinics were first held monthly and as the number of patients applying for care increased the clinics were held at two weeks intervals at each place.

About the last of 1929 clinics were inaugurated at Moorhead and Blaine, being held in a midwife's home at each of these places. At Indianola and Ruleville the clinics were held in the offices of the health department. The clinics at Moorhead and Blaine were held monthly, and patients applying for prenatal care have continued to increase in number ever since the clinics were started. The same results occurred in the clinics at Midway and Rome which were started in 1930 and were held in a school house at each place, and held monthly. In 1931 new clinics were started at Bethlehem and Inverness, being held in a church monthly, and with the same results as the other clinics.

The clinics have proven to be very popular and the number of patients applying for prenatal care have constantly increased, as evidenced by the following figures:

Number prenatal clinics held, 1929, 35; 1930, 46; 1931, 90; 1932 to Dec. 1, 98.

Number prenatal patients under supervision, 1929, 312; 1930, 404; 1931, 658; 1932 to Dec. 1, 766.

Number prenatal examinations, 1929, 538; 1930, 778; 1931, 1272; 1932 to Dec. 1, 1567.

Number postpartum examinations, 1929, 63; 1930, 113; 1931, 200; 1932 to Dec. 1, 335.

About 95% of these patients are colored, although the clinics are open to every prenatal patient in the county. The population of the county is 72% colored and 27% white, the total being 68,000.

The personnel of the department consisted of two doctors, four nurses, one secretary, one sanitary inspector. The trainees, of course, aided in the clinics during their course of training. On July 1, 1932, when the Training Station ceased operations the personnel was reduced to one doctor, two nurses, one secretary, and one sanitary inspector. The only ones working in the clinics, of course, are the nurses and doctor.

At that time the clinics at Midway and Bethlehem were abolished due to the fact that we could not give the time to them and maintain our other activities. These patients, however, live within easy reach of the Ruleville and Indianola clinics as is shown on the map here which also shows the location of all the clinics.

As the map reveals, we are now holding clinics in six different places in the county, and the clinics are so located as to be within reach of every one within a radius of eight miles of each place. This arrangement covers the county. Clinics are held once every three weeks in each place, averaging eight clinics per month. The day of the week is always the same for each place. For instance, the clinic at Moorhead is always on Thursday, Ruleville on Tuesday, etc., and are always planned eight to ten months in advance. The clinics are held at each place on the day of the nurses home visiting in that district, so that when the clinic is over the personnel disburses and works the remainder of the day in that district; thus preventing loss of time and travel in going to another district where she might be due on that day. All the equipment for each clinic, except tables, is carried with us from the office. As to the time given to each clinic, we are usually there and ready to start work by nine A. M., patients have all previously been given cards informing them of the date they are to appear at the clinic and they are always informed to come in the morning. As I said previously, we start work usually about nine A. M. and work until we get through, depending on the number of patients we have. If we get through by one P. M. we disburse the clinic for the day and go about other duties in that district. If at one P. M. we see that we are going to have to work until two o'clock or later we take time out for lunch. During the winter months we usually get through by twelve or one o'clock. During spring, summer, and fall we usually have to work until three or four P. M. Thus you see that during the winter we devote about two and one-half days per week to prenatal work, and during other seasons about two days per week.

Postpartum patients are advised to come for examination six weeks after delivery, at which times the patient and baby are both examined and advised as to their condition. Infant and preschool examinations and immunizations are also done at the prenatal clinics.

As to the routine of the clinic, as each patient enters she is given a number which is attached to her personal history record, beginning with number one. As her number is called the nurse in the admitting room takes the patient's history at a table secured from the midwife's home. The patient then obtains a sample of fresh urine in a bottle which the nurse gives her at the time of admission. The urinalysis is then made by the doctor at a table prepared for that purpose. The patient then goes to the Wassermann table where a specimen of blood is taken for Wasserman either by the doctor or the nurse, most of the time by the nurse. A routine Wassermann is taken on every patient upon her first visit to the clinic, and as often thereafter as indicated. The patient's blood pressure is then taken by the doctor at a table set up for that purpose. The patient then goes to the scales where she is weighed. She is then completely undressed and put on the examining table where the doctor gives her a complete physical examination, including heart, lungs, pelvic measurements, etc., assisted by the nurse. If anything abnormal is found the doctor instructs the patient accordingly, and if a physician's care is needed the patient is referred to her doctor and a letter is sent to him explaining the findings. If everything is normal the nurse gives the patient the routine advice, gives

her a card upon which is written the patient's name and the date for the patient to return. Every prenatal patient is advised to use a doctor in preference to a midwife, both for prenatal care and at the time of confinement. Each patient has an individual record card upon which is recorded everything that is done at each examination.

During the first five months of pregnancy every patient is advised to attend the clinic at least once every six weeks. She is given a thorough physical examination at least once every nine weeks during the first five months of her pregnancy and oftener if indicated. From the sixth to the ninth month of pregnancy the patient is advised to attend the clinic every three weeks and is given a thorough examination each time.

The midwives of each district are required to attend the clinics of that district each time. This helps the clinic, and also educates the midwife as she is present at the time the patients are examined and hears the advice given. The midwife club meets on the day of the clinic, at the place where the clinic is held, and is held immediately after the clinic is over.

The nursing staff attempts to make home visits to all prospective prenatal patients, postpartum patients, and prenatal patients under supervision of our prenatal clinics as their conditions warrant; but in a country whose population is approximately 68,000 you can easily see that the home visiting service to these patients is necessarily shamefully inadequate. Two nurses cannot possible do the home visiting that should be done and keep in touch with other phases of the work.

One of our major problems in our prenatal program is the incidence of syphilis, approximately 24% of our prenatal patients being affected. Every patient that has a positive Wassermann is referred to her doctor for treatment with a letter from the health department telling him of our findings. The percentage of the positives receiving treatment averages about thirty-two per cent; roughly, only one-third of these patients who have syphilis receive treatment. It is believed that present economic conditions are responsible for the fact that such few patients receive treatment, as they are all very much interested in their condition. I believe that at least ninety per cent of them would receive treatment if it were available.

The enclosed graphs serve to illustrate the results quite well. Since the prenatal program was inaugurated in 1928 the maternal death rate of Sunflower county has steadily decreased, whereas it was very fluctuating before.

The results of the clinics as shown in the maternal mortality tables reveal the fact that for 1931 the maternal mortality rate for patients attending the clinics was 1.2 as compared with 5.6 for the entire county. The graph on infant mortality shows a very marked drop from 1930 to 1931. The stillbirth rate of Sunflower county has shown a constant decline beginning with ninety-nine stillbirths in 1928 to sixty stillbirths in 1931.

The attendance of patients at the clinics has been given in previous figures.

The medical profession in Sunflower county as a whole approves our prenatal program and co-operates with us in every way possible, and we do our best to reciprocate. We are very proud to have this co-operation and approval and we regard it most highly. The prenatal program, as well as all the other activities of the Sunflower County Health Department, are carried on realizing that there can be no permanent success of efforts to promote the health of the people and to prevent disease without the active sympathy and support of the medical profession. I sincerely believe that any health department which does not fully appreciate the relationships which should be maintained with the practicing physicians is doomed to failure, regardless of the degree of efficiency attained, or the worthiness of the cause presented.

Of the 1,336 births in Sunflower county in 1931, six hundred and fifty-eight prenatal patients, approximately one-half, attended the prenatal clinics operated by the health dpartmnt. No doubt 1932 will see this proportion at two-thirds or three-fourths.

CONCLUSIONS

The Prenatal Program should be one of the major activities of any health department.

The Prenatal Program as a routine procedure of a health department is practical and valuable in many and various ways.

The Prenatal Program offers many advantages as a feature for a local health department around which the other activities can be built, and is well adapted to working out a co-operative program between the health department and the physicians of the county.

If the medical profession is not providing proper prenatal care in a county, or if such provision is not in prospect, then the responsibility becomes a direct charge upon the health department.

To be effective and to achieve the desired results the prenatal program must receive the active participation of the health officer.

A definite demand from various sources is being made for more adequate and more effective health supervision of expectant mothers.

A county health department can carry a thorough and effective prenatal program as a routine procedure and still maintain a balanced program in relation to the various other activities.

To achieve permanent success in the prenatal program, or any other activity of a county health department, it is most essential that the health workers secure and maintain the active co-operation of the medical profession.

Patience and strength are what we need; an earnest use of what we have now; and all the time an earnest discontent until we come to what we ought to be.

Advances in the Treatment of Pulmonary Tuberculosis in the Last Twenty-Five Years

BY ROSWELL ELMORE FLACK, M.D.
Memphis, Tenn.

In selecting this subject, I am fully aware of the fact that nothing startling has been discovered, but there have been some notable advances made in the treatment of tuberculosis in the last twenty-five years. In order to bring these advances to you forcefully one should compare the end results obtained today with thise of twenty-five years ago. There are physicians present who were practicing medicine twenty-five years ago and are able to recall the attitude of the profession when a diagnosis of tuberculosis was made. Invariably a grave prognosis was made and a very small per cent recovered. Today a much more favorable prognosis is made and a much larger per cent regain their health. Twenty-five years ago the tuberculosis specialist was an object of pity and received commiseration from his professional brethren. This attitude changed and he now receives the same respect accorded to specialists in the various branches of medicine and surgery.

What has brought about this change? To answer this question, progress in treating tuberculosis will have to be detailed.

The advances may be divided into five subdivisions:

1. Improvement in Diagnostic Methods.
2. Air and Rest Cure.
3. Specific Therapy.
4. Collapse Therapy.
5. Chemotherapy.

IMPROVEMENT IN DIAGNOSTIC METHODS

I shall not attempt to give a complete accouont of each improvement but only mention with brief comment the important advances in diagnosis.

The accumulated experience of the study of a large number of tuberculosis patients in sanatoria has given us much knowledge. We noted the various symptoms of early tuberculosis that are many times brought out clearly in the history. These gave us wo.king clues. Besides improvement in history taking we have improved in our physical examination. The advent of the X-ray has meant much in diagnosis and also in the control of the progress of the patient.

The laboratory technique in the examination of the sputum, blood and spinal fluid for tubercle bacilli has improved much and has been an aid in clearing up many obscure diagnoses. The pathology of tuberculosis is much better known today than formerly. We now know the pathology of the early tubercle, its evolution and its ultimate destiny. This knowledge helps us much in diagnosis and also in prognosis and treatment. We have also gained experience in making the tuberculin test and often derive useful information in helping clear up a diagnosis. Complement fixation is an aid in some cases, but not as much as the tuberculin test.

AIR AND REST CURE

We have not discovered any new principles in regard to the air and rest cure, as they were outlined by Brehmer, Dettwiller and others. However, we have learned to carry out the principles announced by these pioneers in more detail and apply them in a larger number of patients. This point is well illustrated in the handling of tuberculosis patients by Sir William Osler. In his wards, he permitted those with fever of 100.5 to be up a great part of the time and even those with fever of 101/102 to sit up for an hour or so once or twice daily. He saw that others were getting better results than he by keeping febrile patients at complete rest and later followed their practice. When active afebrile patients were kept in bed by specialists he looked upon this procedure with doubt. Only a few years before his death he accepted this procedure as beneficial. This example will no doubt parallel many such cases and illustrates how the principles of the classical air and rest cure are being applied more intelligently and in an increasing number of patients yearly.

There may be discoveries that will aid us greatly in treating tuberculosis and I believe there will be but the bed rock of all therapy will remain the air and the rest cure. Nothing will supplant it for the pathology of tuberculosis is such that time and rest are essential to effect healing.

SPECIFIC THERAPY

In 1882, Robert Koch announced the discovery of the tubercle bacillus and definitely established the etiological agent of tuberculosis. This was an epochal discovery and it was thought tuberculosis would soon be controlled. With the isolation of the causative organism of tuberculosis, it was believed that a potent virus, as in smallpox, would soon be prepared. The scientific world was waiting for such an announcement and was prepared for it. Koch announced the preparation of his lymph, or old tuberculin, in 1887, and claimed great therapeutic value for it. Time proved that his claims were unfounded and that tuberculin has been released upon premature experience and knowledge. Much harm resulted as the dose was many times too large and the type of case was wholly unsuitable for its administration.

Since the days of the early tuberculin era we have gained much useful knowledge in the use of specific therapy. We have been able to winnow the chaff of extravagant claims from the golden grains of truth. We now know how to select suitable cases for specific therapy and to reject the unsuitable. We have also learned that the cases that promise the most benefit to be derived from specific therapy are those with limited tuberculosis and who are afebrile. Specific therapy used judiciously in such cases is an adjunct; no one who has had adequate experience will deny it.

Specific therapy has not written "finis" after all the good that has been accomplished by its use, as the field of immunology is broad and only a beginning has been made. The work of Calmette of Paris gives much promise. He has been able to successfully immunize calves with his bile culture of tubercle bacillus. This is a great step forward and this work suggests that on perfection of his method, it may be successful in protecting children from tuberculosis.

COLLAPSE THERAPY

Under this heading we mean to include artificial

pneumothorax, thoracoplasty and unilateral phrenicotomy.

In 1819, James Carson the English physiologist, proposed the theory of artificial pneumothorax, but its practical demonstration awaited upon Forlanini who published his first results in 1894. This was a great discovery and it is gradually growing in favor as its application and principles are better understood. In some cases its results are nothing less than spectacular. In cases that would soon die from exhaustion, the successful application of pneumothorax really brings them back from the brink of the grave and restores them to usual health and usefulness. In cases of persistent bleeding with free pleural space, the hemorrhage is promptly checked and the patient's fears as well as his family's of impending death are relieved. As knowledge increases, its application is being extended. Even partial bilateral compression has been successfully obtained with good results. And the last word of its usefulness has not been written.

When artificial pneumothorax is not successful, we may resort to thoracoplasty. This procedure is gaining popularity as its application is better understood. We are realizing more and more that the so-called hopeless case of tuberculosis is no longer hopeless when studied in the light of recent advances made in therapy. Such procedures need the close co-operation between the surgeon and the internist. In this country, Lilienthal, Alexander and others are doing thoracoplastic operations with increasingly good results.

Before resorting to thoracoplasty unilateral phrenicotomy may be tried. This procedure is also helpful in some cases of partial artificial pneumothorax. Its application is indicated when the lesion is basal or in the lower lobe. On section paralysis occurs in the corresponding half of the diaphragm and collapse of the lower third of the lung follows.

CHEMOTHERAPY

It has been a dream of the chemotherapist for centuries to discover some substance when introduced into the body that would cure disease. After Erlich's discovery of salvarsan a new impetus was given to investigators in this field to renew their efforts.

About two years ago Prof. Moellgard announced his discovery of sanocrysin, or auro-thio-sulphate, a gold salt, and also his animal experiments and therapeutic results in tuberculosis. His report appeared to conform to all of Erlich's tenets, as he claimed that the tubercle bacillus was killed in vivo. After the administration of sanocrysin, both in the experiment animal and in the tuberculous patient, a reaction often followed. Prof. Moellgaard explained the reaction as due to the release of tuberculin formed by the destruction of tubercle bacilli in situ by the gold salt. To counteract these reactions he prepared an anti-tuberculin serum which he claimed protected both animal and patient from the tuberculin shock. His method of preparation of his serum was the same as others had used, and there was nothing new in his idea, as many immune sera have been prepared and have been abandoned as useless in tuberculosis therapy.

However, Moellgaard's announcement was received with due respect and specialists in practically all countries have given sanocrysin a fair trial. All reports so far fail to substantiate Moellgaard's claims. The tuberculin shock following the administration of sanocrysin is not due to tuberculin but to chemical poisoning quite similar to mercury poisoning. The stomatitis, dermatitis and nephritis which have been observed in patients treated with sanocrysin explain the phenomena of the so-called tuberculin shock.

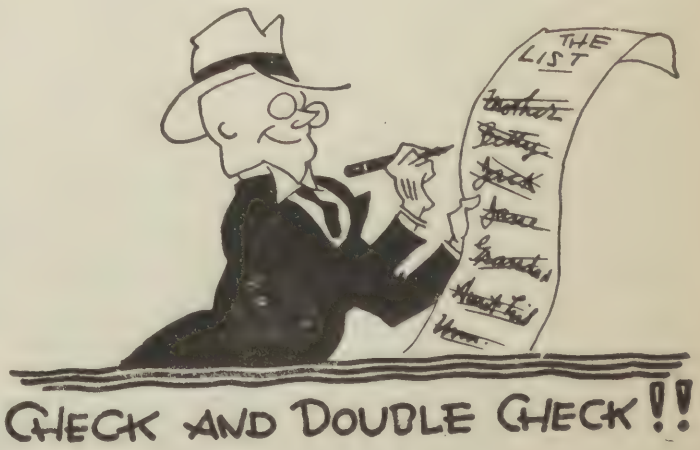
While Moellgaard's claims have not been substantiated, sanocrysin has not been found to be valueless. Investigators are urging more time for study in the hope that new facts may come to light that will prove to be of value. This is a fertile field for investigation and much may come from it that will change our therapy in tuberculosis.

In conclusion, let me say, that there have been notable advances in diagnostic methods and in the therapy is the outstanding contribution in the last quarter of a century.

Programme

OF THE NORTHEAST MISSISSIPPI
THIRTEEN COUNTIES MEDICAL SOCIETY
HELD AT MACON, MISS., MARCH 21, 1933

Meeting called to order ..... President F. L. McGahey
Invocation ..... Rev. R. D. Pearson
Reading and Adoption Minutes Last Meeting
"Infantile Paralysis" .....
..... Dr. E. Laurence Scott, Birmingham, Ala.
"Herpes Facialis with lesions in Gasserian and Merkel's Ganglion" ..... Dr. J. G. Lilly, Tupelo
General Discussion.
"Tracing the Fraternal Concept to a Professional Attitude" ..... T. H. Bayburn, Pontotoc
General Discussion.
"Cardiospasm" ..... Dr. M. W. McRae, Corinth
General Discussion.



to see if my doctor has paid his local Society dues.

Pre-operative Management of the Acute Surgical Abdomen*

BY DR. F. L. McGAHEY
Calhoun City, Miss.

In presenting this short paper I do not propose to go into a detailed discussion of the diagnosis and treatment of the various conditions that cause an acute surgical abdomen, but to outline roughly what Iconsider to be the best management of these cases from the time we, as general practitioners, see them till they are turned over to the surgeon. In referring to the acute surgical abdomen I have in mind especially such conditions as acute appendicitis, ruptured gastric or duodenal ulcer, intestinal obstruction, ruptured ectopic pregnancy, and cholecystitis as the most important. Acute specific infection of the tubes is not considered to be an emergency.

I am of the opinion that we do not need any better line of treatment than we have had for the past several years in order to materially reduce the present high mortality rate in acute surgical abdomens, but I do believe that we need a better understanding and co-operation on the part of the men who are doing general practice, into whose hands fully eighty-five per cent of these cases first fall.

I fully appreciate the fact that it is often impossible for our best diagnosticians, with their well equipped laboratories to make an accurate diagnosis of the exact pathological condition prior to operation, but when we stop to consider the fact that the treatment of all these conditions that give us the acute surgical abdomen is surgery and early surgery, then it seems to me that we should be satisfied if we are able to make a diagnisis of acute surgical abdomen and if we are able to make a differential diagnosis, so much the better.

The cardinal signs of acute surgical abdomen are pain, vomiting, rigidity, tenderness and pulse and temperature changes, with other signs and symptoms that come on after the early stage and of less importance.

After you have satisfied yourself that you have made a reasonably correct diagnosis of acute surgical abdomen, the first and most important thing to do at this time is to make your patient as comfortable as possible. Morphin in quarter to half grain doses is usually indicated but should not be given before a definite diagnosis is made. Counter irritation with spirits of cholorform will sometimes give a little temporary relief. Ice bags are of great benefit and especially if it is going to be several hours before you will be able to get the patient to a hospital and in the hands of a surgeon. All food should be withheld and if there is any one thing that should not be done it is this, "Do not give any purgatives of any kind," nor should any enemas be given. I am thoroughly convinced that one reason and the main reason for the increased mortality rate in cases of acute surgical abdomen is because the general practitioner, into whose hands these cases first fall, has never learned not to give a patient with acute abdominal pain a purgative. I don't think any patient who has an acute abdominal pain should be given any purgatives of any kind till acute surgical conditions of the abdomen have been ruled out.

I have never tried to do any surgery and never expect to and have no defense to offer for any surgeon but if we see one of these cases and give him temporary relief with narcotics, then give him a few horse doses of calomel or some other purgative and allow him to be fed and then give more opiates as needed to make him fairly comfortable and keep this procedure up for two, three or four days and then carry him to a surgeon and expect to get good results, we are oftentimes going to be sadly disappointed. I am ready to confess that I have been guilty of doing a little of this kind of practice but I am glad that I am able to tell you here and now that I am not doing that now. If I see a case that I think is an accute surgical abdomen, I do not give purgatives, enemas or food and if the condition has lasted for six or eight hours and he refuses to go to a surgeon or call in consultation, I frankly tell either the patient or his family or in some cases both that it is a case where surgery alone is indicated and that I can't do anything for him and that I am clearing myself of all responsibility.

I think we should talk over with these patients and their family the proposition of an operation either before or immediately after giving them a hypodermic, explaining to them in detail the dangers and complications that may arise as a result of delay. If my patient has as much as average intelligence I talk very freely and frankly with him, telling him as near as I can just what I think his condition is and especially explain to him why medical treatment is not indicated in his case and I find that almost one hundred per cent of them will submit to operation if properly handled. In almost all cases in negroes and in whites of low mentality there is no use to waste time trying to explain anything and I think the best thing to do in such cases is to tell them that they are going to die if they are not operated on and carry him on to a surgeon.

Some of these cases, especially those that are very sick and in extreme shock, should be transported in an ambulance and all of these cases that have to be transported any distance should be ambulance cases. We often find these cases out in the country where the roads are impassible and away from telephone service where we even have to haul them in wagons and in cases like this I think we should do everything possible to combat shock and at the same time get the patient to a hospital as soon as possible.

In conclusion I would say that it is not only the duty of a general practitioner to recognize the presence of an acute surgical abdomen but that it is also his duty to understand and insist that prompt surgical intervention is absolutely necessary. I had much rather have a beginner take out my appendix clean than to have a master surgeon after it had ruptured. In my opinion the acute surgical abdomen is purely a surgical condition yet the mortality rate is in direct ratio to the manner in which they are handled prior to operation which, in at least eighty-five per cent of cases, is determined by the general prac-

*Read before Staff Meeting, Houston Hospital, Houston, Mississippi, February 23, 1933.

titioners of the country.

When the general practitioners recognize the fact that the only treatment for the acute surgical abdomen is EARLY surgery, and that food and purgatives should not be given, then we are going to see a decided decline in the mortality rate in cases of acute surgical abdomen.

University of Tennessee

By J. S. Coe

The University of Tennessee operating on the quarter system graduates a class every three months —March 25th turned thirty more young doctors out on the public. Of these, seven were originally from Mississippi.

James Gordon Dees, son of J. T. Dees, of Philadelphia, Mississippi, rated well in his class and will serve an eighteen months interneship at the Memphis General Hospital. James Gordon received his premdical and literary education at the University of Mississippi and was a member of Theta Kappa Psi medical fraternity.

David W. Kennedy from Vicksburg, is a B. S. from Southwestern and a Theta Kappa Psi. He will interne at Shreveport General Hospital.

Hailing from Booneville is Bernard Patrick also a Theta Kappa Psi from the University of Mississippi. He is planning to return to his native heath and begin building a practice—even in these exacting times.

John C. Pearce, the rotund son of Dr. J. H. Pearce of Falkner, received his pre-medical training at Uniyersity of Alabama and was affiliated with Theta Kappa Psi. He will interne at St. Josephs Hospital in Memphis.

Henry Sproles Provine, who is the son of Dr. J. W. Provine, President of Mississippi College, Clinton, is a Phi Chi and will interne at T. C. & I Hospital, Birmingham, Alabama.

From Meridian is Karl Otto Stingily, son of Dr. C. R. Stingily of the Stingily Laboratories, Meridian. Karl, also from the University of Mississippi, will nterne at the General Hospital, Little Rock, Arkansas.

Only one nurse was graduated from Mississippi—Mrs. Bertha Henshaw Williams, step-daughter of Mrs. T. R. Motley of Maud, Mississippi.

In the incoming section, we have only one Mississippi boy, Roy W. Hall, son of Dr. R. W. Hall of Clinton, Mississippi.

Tracing the Fraternal Concept To A Professional Attitude

BY T. H. RAYBURN, B.S.M.D.
Pontotoc, Miss.

Let us, that we may comprehend more fully, go back our respective ways and emerge again from that state of being that restricted our sense of environment only to a visual magnitude. Only then may we remember how elated, how shocked, how mysteriously surprised we were to find that we existed only as integral parts of a universe bounded by infinity.

Prepubertal conceptions not vain, we were then applied by organic mechanism to rising primordial instinct. We bridged the interval between pre and immediate post-pubertal influence and perceived, as from the annals of time, something of the infinite. Time relations persisted in wearying monotony. Hereditary instinct involved our being. Then power, until now latent, made itself manifest and we felt evolved from us something of aspiration, something of independence from hereditary character. We came slowly to grasp the significance of some Absolute Being, some hidden power of intangible resource. No less awed were we to find that each of us as individuals is representative of some periodic cycle of regenerative impulse, each in continuity with preceding like complexes.

Recurrent as is the broken chain of impulse in its intricate cycle, there is still in each repeating phase something that would link us with one continuous thought, one harmonious stimulus to one impelling force. Having come then to a realization of some power from behind, we became of the natural. It was not until then that each of us (although certain individual traits were manifest in the physical) in accord with previous experience, began to build in the direction of an ultimate universal concept. Our first effort, a vain attempt to secure a tangible relation between the material and the spiritual, lead us to our first and most definite realization of the interdependence of each of us as material beings. Until we did come to some conception of this relation between the finite and the infinite, we had not come to the fullest understanding of brotherhood. We thus having laid the background of the universal brotherhood, every individual of which is united by a bond of interest that would make of a more definite relation of what is and what is to be, we are in like manner come to our own more limited organization where we are again parts of an associated whole that bids for professional integrity. With anticipations of immortality are we greatly concerned, and we, as a means to that end, have come as a conclusion to our chosen profession.

We choose now to entertain all that goes for the enlightenment, for the betterment of each of us as carriers of the healing wand. We nave chosen, as a supplement to the fundamentals, a parallel to the great universal brotherhood. We must be eternally indebted to those before us who felt the need of an organization wherein members of the profession might assemble in discussion, wielding the wand of professional insight, and carrying with it the practical applications. Prmarily are we united in such organized relations for the purpose of promoting intellectual recourse, moral stability, and social impulse. We are no less concerned with the acquirement of a professional dignity, a professional diplomacy, and a spirit of service.

Once identified with organized medicine—the culmination of a life-time's dream—we find ourselves beginning to dream anew of the future realities, realities fashioned by precedent, guided by custom, and controlled by individual impulse. An impulse under which may beat a thousand woes, ten confidences, but

a million joys, confidences reluctantly received by zealously guarded, the woes a contrast to our own puny ones, and the joys our compensation.

Under the light of Providence shall we be directed, guided to the one ultimate aim by the darkness we may dispel, and the cares we may displace. Serve nature in her needs, and by our own spirit instill the hope of eternity and the tranquility of dream and creation in our charges. Theirs shall be our beacon light to propel us to diligent, sincere, and skilled application of our science to their infirmities.

Feeling gentled but not subdued, we prepare to go our way silently proclaiming our creed, prepared to respond to even the humblest of our own "earth born companions and fellow mortals."

Ole Miss Medical News

By Woodard D. Bearham

ASHFORD HUNTER LITTLE, B.S., M.D.,

Professor of Physical Diagnosis and Medicine, and Associate Professor of Obsterics

Graduating from the University of Mississippi with the B.S. degree in 1920, Dr. Little received the degree of Doctor of Medicine from Tulane University of Louisiana in 1923. He accepted an Interneship at Hotel Dieu, New Orleans, which he held until beginning to serve as an interne in the Southern Pacific Railroad Hospital, Houston, Texas, a position which he filled until June, 1924.

On that date he returned to Mississippi, his native state, to act as House Surgeon at the Mississippi State Charity Hospital in Laurel.

In October, 1925, he removed to Oxford where he has resided since that time. Since living at the "home of Ole Miss," Dr. Little has been a member of the staff of the Oxford Hospital. In July of 1927, he did work in Urology in the Tulane Post-Graduate School at Charity Hospital in New Orleans.

Dr. Little accepted an Associate Professorship in Physical Diagnosis and Medicine at the University of Mississippi School of Medicine in September, 1928. He has held that postion since then. In August, 1930, he studied Allergy in the Balyeat Hay-Fever and Asthma Clinic, Oklahoma City, Okla.

He has been secretary of the North Mississippi Medical Society since 1927. Prominent in civic affairs, he is an outstanding member of the Rotary Club of Oxford. Fishing is his chief hobby and all forms of sports have a strong appeal to him. Dr. Little is affiliated with Nu Sigma Nu and Sigma Chi fraternities.

Resolution

North East Mississippi 13 County Medical Society assembled in first quarterly session at Macon, Miss., March 21, 1933.

Resolution: Subject, "The two year medical school at the University of Mississippi."

Whereas: The two year medical school at the University of Mississippi is one of the most thorough in the United States as proved by the grades made by its graduates when they go to other schools for their junior and senior years, by their work as internes, by their high grades made on state examinations for licenses, and by their efficiency and resourcefulness in practice.

The greatest endowment a medical school can have is its teaching staff. In this Ole Miss Medical department has a strong fort. It points the student to the right view point. It instills right principles. It gives the student a vision. It teaches the student that he must win by hard work and by merit. It brings up all the sides needed to make a strong and useful practitioner.

With its present buildings and equipment this school has turned out a class of men who have not been excelled in this nation. It can continue to do so. It is positively no time to demand more buildings and more equipment generally speaking. The world must learn to do with less. Medical students should not be taught into helplessness by too much equipment. This may be the cause of the dearth of doctors now in the rural communities and the overflow in the cities. Let Ole Miss Medical School continue to demonstrate to the world what can be done with a reasonable amount of funds. When it fails to do this it will be time enough to put its head on the chop block.

It is the type of man that counts for the most in the practice of medicine. We must not rule out the poor boy of which we have many. We must keep our two year course so that we may discover and give a start to the young man with a natural professional mind, a medical soul, and a missionary heart. This type of young man the medical profession needs to day worse than it does stone buildings and marble floors.

Merit should always be rewarded. As long as the Ole Miss Medical School, the two year course, turns out the type of men it has and is now, it is unjust, un-

fair, and "uneconomical" to destroy it.

We therefore urge that every local society within our confines and the State Medical Association join us in urging our Governor, our State Board of Trustees, and the National Medical Council to place our two year medical school back in regular standing and let it alone and quit asking for more money and more equipment until financial conditions improve and until this school fails to do work equal to any other medical school in the United States.

Committee:
Doctors: W. H. ANDERSON, Chairman,
J. M. ACKER, JR.
M. Q. EWING.

Dr. R. S. Kirk

On the evening of February 11th, 1933, Dr. R. S. Kirk of Amory, died at the Baptist Hospital in Memphis. The cause of death was carcinoma of the cecum. He had not been well for a considerable time—had undergone a "first-step" operation a short time before his death, but he did not recuperate sufficiently to have the "second-step" of the operation done. His remains were brought home on the day following his death and he was buried on the afternoon of Febbuary 13th, in Masonic Cemetery in Amory. His was the largest funeral attendance ever held in Amory. Dr. Kirk was the oldest physician in Monroe county, both in years of life and practice. In all probability he had rendered professional service to more people than any man who ever practiced in the county, and possibly was the most poorly paid in proportion to the work done. That is to say, most poorly paid in money. But no man ever had more friends (for all who knew him were his friends) or was more devotedly loved by his clientele. He is, and will long be, missed, not only by his family, but by the community in which he had lived so long and labored so faithfully.

Therefore, be it resolved by the North East Mississippi Thirteen Counties Medical Society, that in the death of Dr. Kirk, the society has lost a member whose life was an honor to the profession and an inspiration to all medical men who knew him.

Be it further resolved that this soiciety goes on record as greatly appreciating the splendid life of service he gave to humanity and deeply regretting his death.

Be it further resolved that this society extends its deep and sincere sympathy to his friends and sorrowing family.

(Signed) NORTHEAST MISS. 13 COUNTY MEDICAL SOCIETY.

Medical Society Meets

NEW ALBANY, Miss., March 23.—The quarterly meeting of the North Mississippi Medical Society was held here this afternoon at the Baptist Church. Seventy-five doctors from north Mississippi and from Jackson and Memphis, Tenn., were in attendance. Some of the town represented were: Tupelo, Holly Springs, Water Valley, Corinth, Oxford, Okolona, Aberdeen, Ripley, Blue Mountain and Pontotoc.

The following subjects were discussed: "A Motion Picture Study of the Heart in Health and Disease," Dr. Lyle Motley, Memphis; "Umbilical Hemorrhage," Dr. R. G. Grant, Holly Springs, with discussion opened by Drs. C. M. Murry and R. J. Criss; "Childhood Type Tuberculosis," Dr. W. A. Tooner, Tupelo, with discussion opened by Drs. N. G. Gholson and F. E. Linder; "Diphtheria," Dr. I. B. Trapp, New Albany, with discussion opened by Drs. D. C. French and R. M. Adams; "Special Feature—"Thirty Minutes of Thrills," a fishing motion picture.

The business session was held after the completion of the program.

Officers of the Medical Society are Dr. G. A. Brown, Water Valley, president and Dr. A. H. Little of Oxford, secretary.

Letters to the Editor

Dr. W. H. Anderson
Booneville, Miss.
My dear Dr. Anderson:

Several months ago I wrote you a "Depression Bitten Letter." Today I am mailing you a sequel—a poem, the author unknown, but evidently by a man who knowns.

"THIS MAN REALLY KNOWS"

"Absolute knowledge have I none,
But my aunt's washer-woman's sister's son,
Heard a policeman on his beat,
Say to a laborer on the street,
That he had a letter just last week,
Written in the finest Greek,
Of a colored man in a Texas town,
Who got it straight from a circus clown,
That a man in the Klondike heard the news,
From a gang of South American Jews,
About somebody in Borneo,
Who heard a man who claimed to know,
Of a swell society Madamoiselle,
Whose mother-in-law knows certainly well,
That her seventh husband's sister's niece,
Has stated in a printed piece,
That she has a son who has a friend
Who knows when this depression is going to end."

I may write you again after Roosevelt has "fixed" everything.

Sincerely yours,
E. M. HOLDER.

We thank you Doctor Holder, you are a man of few words but much wisdom. We know that you know that the son's friend knows. But if there should be any slip about it in any way, have him subscribe for The Mississippi Doctor in which he will find the entire matter explained fully. Any time you catch the low down on any important social or economical question of human interest passing over the mental wires please do as you have been doing, rush it to The Mississippi Doctor for further consideration.—Ed.

Two men were seated in a crowded tram car. One, noticing that the other had his eyes closed, said, "Bill, ain't you well?"

"I'm all right," said Bill, "but I do 'ate to see ladies standing."—Dartford Chronicle.

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Two of our dormitories are conducted on the co-operative plan, whereby the students do much of the housework, thus reducing expenses considerably. We have six splendid brick buildings, three of which have been constructed recently at a cost of nearly of a third of a million dollars.

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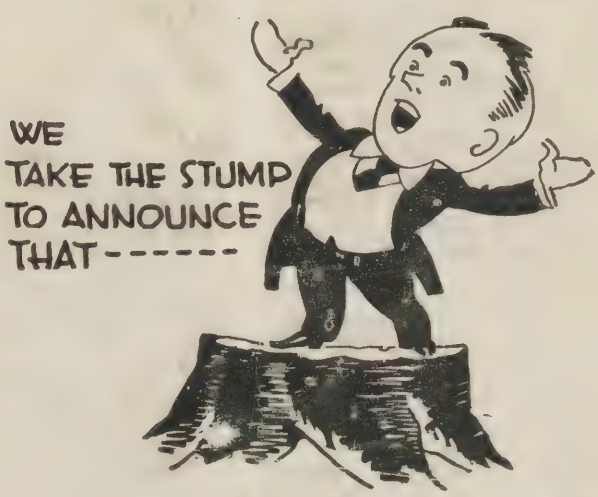

this is the last call to the Mississippi State Medical Association at State Capital, Jackson, Mississippi, May 9, 10 and 11, 1933. Robert E. Lee Hotel, Headquarters.

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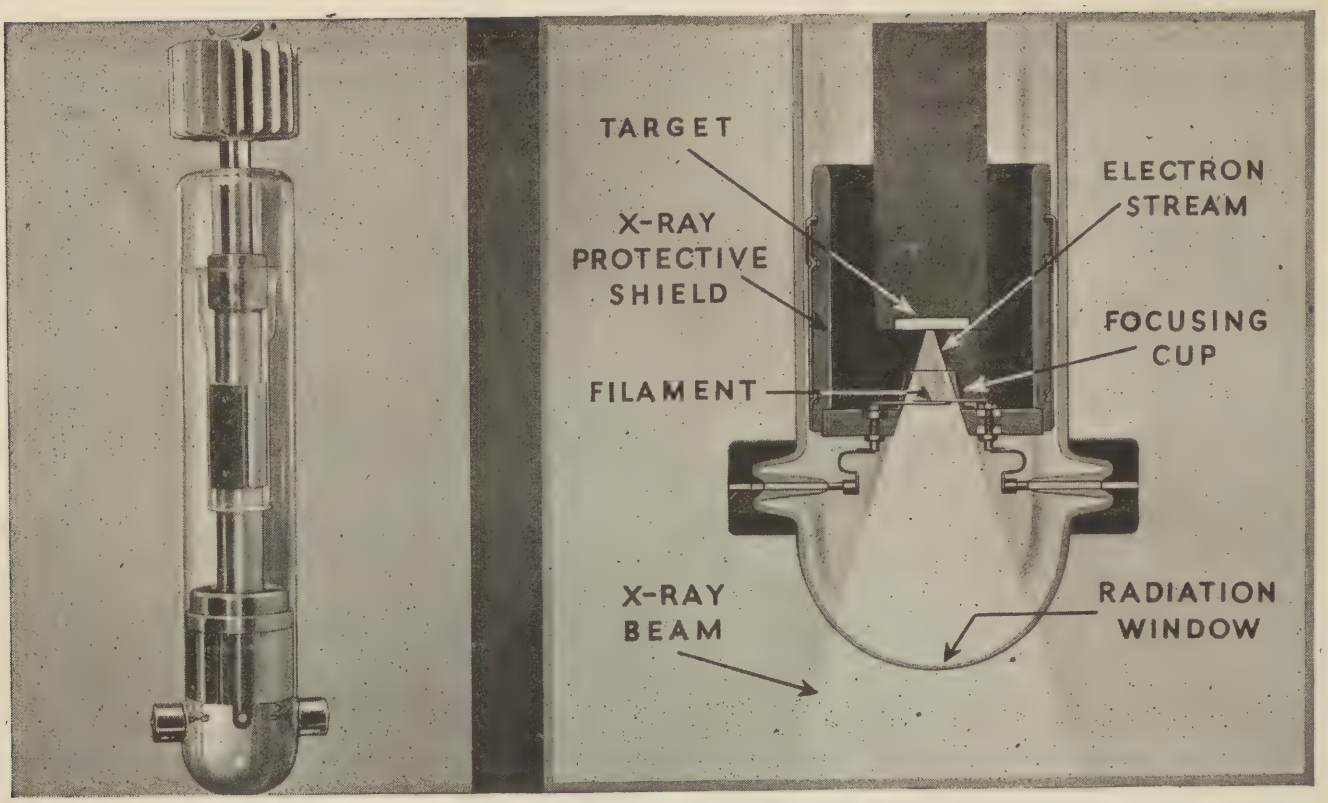

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—AND—

NORTH MISSISSIPPI MEDICAL SOCIETY

—AND—

MID-SOUTH POST GRADUATE MEDICAL ASSEMBLY

W. H. ANDERSON, M.D., Editor and Manager
MRS. W. H. ANDERSON, Assistant Editor

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The automobile may account for some cases of autointoxication.

We have a fine bunch of papers in the hopper, better get on The Mississippi Doctor line.

Medical ethics is a subject upon which non-participating doctors often discourse.

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The Mississippi State Hospital Association has lots of important work to do. Our prediction is that it is going to do it.

Mississippi is taking the lead in the development of community hospital. It is a fine piece of constructive medical service.

President Acker's address on the "community hospital" at the State Medical Association at Jackson will be well worth your hearing.

Dr. Kolmer of Philadelphia was one of the most popular essayist at the Mid-South. You will be pleased and profited by reading his papers in this issue of the journal.

The medical profession should do its best to give value received always, and then it should teach the laity that this service should be paid for.

Dr. Dicks is military in manner, dignified in behavior, and broadly educated, all of which fits him well for the presidency of the state medical association.

Don't fail to read Dr. Cohns' paper on tumor of the neck. He covers the subject. He writes with accuracy. He is a teacher in Tulane that makes the facts stick. He is practical in practice.

In our last issue Dr. McGahey had a paper on preoperative treatment of the acute abdomen. It was a fine sermon that every practitioner should read and read again. Many are the lives his admonition would save.

Dr. E. Laurence Scott of Birmingham gave us a fine discourse on Infantile Paralysis at our last meeting. You who heard it will be glad to read it and the ones who did not have a nice treat. We were delighted to have him with us.

The American Association for the Study of Goiter will meet in Memphis, May 15, 16, 17. You will see the program elsewhere. This is a fine treat to the medical profession of the Mid-South. When you see the line-up you will feel that you can not afford to miss it.

You will note that we have a number of cuts in this issue of the journal. We hope to have a number from time to time. We want to get better acquainted. It helps to see how a man looks. "There is no art in telling the minds construction in the face."

We feel mighty proud of the fine list of papers in this issue of the journal. Don't fail to read any one of them. The Mississippi Doctor covers the entire field of medicine and surgery in the course of the year. We are greatly pleased with the splendid list of new subscribers we have received recently.

The June meeting of our society will go to Monroe County, Greenwood Springs. It will be a good meeting. You can depend upon that. And then we will journey down to Calhoun City, the home of one of the most active presidents this society has ever had. It will be a record breaker. We will go you a ginger cake to a hole in a doughnut on this.

A community hospital can not run as low a cost per patient as the state owned hospitals because the private hospital has its investment, has to pay taxes, and has to keep up its equipment. This shouid be easily understood and is by many ordinary people. We have some members of the legislature and other officials who can not fathom it.

Do honor to yourself, to your society, to your secretary and state president and good to your clientele by paying your dues to your local society. This is one debt you can not afford to not pay. You will do better work, have a better morale. You will collect more money also. You can not have financial and professional success as long as you fail to pay your local dues.

Attend your state medical association if at all possible. Your first duty is to your local society, to pay your dues and attend its meetings, next is your state. The meeting is at the state capital. This is where it should be. It would be much better for the association to locate it permanently in the state capital, if not for every session, for every other one. When you try to make a pleasure trip out of the association, you don't learn much to carry back to your clientele.

You will read in this issue the report of the committee on community hospitals. Read it carefully and study it. It will be read before the house of delegates. It is published so that you will have an opportunity to make yourself familiar with it. This committee is doing its best to do one of the most constructive pieces of work that has been done by our state medical association in its entire history. The small hospital is the home of this nation medically speaking. The system of helping the charity of the state that the committee is the most efficient for the paper and it is the most economical. The five state charity hospitals have rendered some very good service in the past but they are now obsolete. They are five political footballs which no longer serve the best purpose. The country folk have been paying his taxes all these years. He has a right to have his service brought to him the same as the man in the city where these hospitals are located has been having his. One central hospital might be fine if the state can afford it, but one is all that is permissible. The community hospital is our biggest means in bringing modern medicine to the masses at a reasonable cost. It is just and fair. It will help to maintain a medical center in each community. It saves transportation expense. It eliminates the danger element of time in the very seriously ill. It raises the general batting average of the profession. They are imperative if the people are to receive the best service in the small town. The machine age demands it so that the medical profession may be able to render better service out on the commercial firing lines. Fifteen per cent per capita will take care of the most urgent charity reasonably well. Our state charity hospitals cost us a hundred thousand a year before even one patient is treated. Medical service, economy, justice and common sense are demanding a needed service through the community hospital. The community hospital means better service at less cost. It will mean that every person in the state will be treated alike, not just one fifth of the population in the larger towns. Read the report.

Modern medicine to the masses at less cost to the individual and more profit to the general practitioner—this is the challenge.

Masses In The Neck*

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Associate Senior Surgeon, Touro Infirmary.
NEW ORLEANS

I have elected to talk about a subject which is a common experience with all, masses in the neck. One cannot help but be surprised at the flippant manner which characterizes the attitude of many doctors when they are confronted with a mass in the neck. Without much ado a diagnosis of tubercular cervical adenitis or a luetic adenopathy is ventured. The absurdity of this attitude can easily be proven when one has access to large groups of records of cases treated in various hospitals, and when he has the opportunity to see patients who have had unnecessary mutilating operations done for supposed tubercular cervical adenitis when in reality the patient had had a condition in no way related to tuberculosis.

It will be my purpose to try to discuss the most important factors in the handling of each group of cases which present manifestations at times so similar and yet due to causes so varied.

Diagnosis—whether in the neck or any other part of the body, should not be attempted by so-called snapshot methods, but only after consideration of ll possible factors. This requires careful consideration of the various types of diseases which may involve each system.

It was the custom of one of my former teachers, the late Dr. Dyer, to make a diagnosis by an analytical and then a synthetic process. In order to properly analyze any given mass in the neck one must first have a definite scheme in mind. It is well to remember that all masses in the neck are divisible into two great groups—(1) congenital, and (2) acquired.

Congenital conditions are divisible into those which arise from the branchial apparatus, Thyro Glossal Cyst, Hygroma Colli, and those which arise from the Cervical Sinus, such as Ranula.

The acquired conditions found in the neck are divisible into, Infections, Tumors, and Blood Dyscrasias. The infections which involve the neck are either the result of an acute or chronic process.

Tumors in the neck may arise from anyone of the various systems found in the neck—lymphatics, vascular, nerves and special organs. Tumors are divisible into those that are benign or malignant. Magligant growths in the neck readily divide themselves into two groups—primary and secondary, or metastatic growths.

Blood dyscrasias, such as lymphatic leukemia mus be considered. Hodgkin's disease must be treated independently because it is considered by some to be an infection and by others to be a malignant process Special attention must be given to this disease the last stages of which are described in most textbooks. The clinical picture which one sees is at so much va riance with the usual description it is worthwhile to discuss it independently.

Often times one is unable, even after the most careful clinical analysis, to arrive at a definite diagnosis. Laboratory data is essential. It must be clearly kept in mind, however, that the laboratory cannot specifically diagnose the material submitted to it in all cases.

Before undertaking a discussion of the analytical outline I would like to discuss briefly the question of the location, age, duration of the symptoms and the constitutional reaction.

In connection with the location I am reminded of an aphorism of one of my distinguished teachers, the late Dr. Edmond Souchon, who was in the habit of saying "If you know where it is you will find it, if you do not know where it is, you will not find it."

* * *

Cystic masses in the neck which are found soon after birth, if not associated with acute constitutional reactions or local signs of an inflammatory character, must of necessity be considered to have arisen from a vestigial remnant of embryonic life. If the mass is associated with acute inflammatory manifestations, and is in the region of certain of the lymphatic glands, knowledge of the areas drained by the particular lymphatic glands will give one a key as to the source of the infection. For instance, a pre-auricular glandular enlargement is often associated with infection about the ear or the side of the face in the region of the eye. The drainage from this area passes through the pre-auricular gland before reaching the digastric and anterior cervical triangles. The source of the infections in the digastric triangle may be sought for in the pharynx and the scalp.

In adults, particularly those past middle life, the finding of a mass in the neck of unexplained origin demands the most careful investigation of the mouth, pharynx, tonsillar region and the larynx for a primary lesion.

It is surprising the number of clinical diagnoses which are not confirmed by laboratory data. It is further surprising how many conditions can be turned up by a well taken history, and a careful analytical method of arriving at a diagnosis.

The first group of cases which one must consider, if a mass is present in a very young subject, are those of congenital origin, the so-called branchial cysts, the thyro-glossal cyst, ranulae, and hygroma-colli. In order to consider this particular group it is necessary to review briefly their embryologic origin and where one may expect to find them. A great deal of interesting work has been done, dating back exactly one hundred years, when Ascherson stated that he believed that these cysts and fistulae were related to branchial clefts. From 1908 to 1913 Wenglowski investigated the subject by making autopsies and serial sections of the cadavers of infants, as well as embryos as small as 2.6 mm.

In the United States the late Dr. James E. Thompson of Galveston, Texas, was probably the most original investigator, thinker and surgeon in this field. His conclusions and theories have formed a basis of most surgical thought in this country on the subject of congenital cysts and fistulae in the neck.

The branchial apparatus develops early in embryonic life, and its existence as a distinct apparatus is

*Read before the forty-ninth session at Mid-South Post Graduate Medical Assembly, February 17 1933.

of very short duration, usually disappearing by the end of the second month.

There are six arches and four clefts. "Each arch contains a basis of cartilage, a vascular arch, nerves and muscle elements. The embryonic origin of the muscles of the arches is identified **by their nerve supply.** With the increase in length of the neck of the embryo the arches descend and carry their muscular elements with them." (Thompson).

A difference of opinion exists with reference to the structures which develop from the various clefts and arches. According to Thompson the first arch forms the foundation of the lower jaw. The second forms the hyoid. It's posterior end persists as the stapes. The middle portion persists as the styloid process and the stylo-hyoid bone. The third arch is represented in adults by the great cornu and body of the hyoid bone. The fourth arch is represented in the adult by the upper portion of the thyroid cartilage. The fifth arch is represented in the adult by the lower portion of the thyroid cartilage. The sixth arch is represented in the adult by the cricoid and arytenoid cartilage and the cartilaginous rings of the trachae and bronchi.

The first cleft persists. Its external depression is represented by the external auditory meatus. The membrana tympani represents probably the cleft membrane. The second, third and fourth clefts disappear and usually leave no trace.

In a very young embryo the second arch grows downward and covers the third and fourth, and comes into contact with the body wall behind the fifth. By this growth the orifices of the second, third and fourth cleft depressions are covered up and a space is shut off into which they open. This is called the **Cervical** Sinus. It usually disappears.

"It is difficult to determine, says Thompson, the part played by the cervical sinus in the formation of branchial cysts. It is more than probable that is is responsible for the cysts and fistulae met within the lower part of the neck below the level of the thyroid cartilage." More attention will be paid to the cervical sinus when discussing ranula.

According to Wenglowski and Meyer, from whose work I quote the following "It is accepted nowadays that the following structures develop from the following clefts and arches; First cleft—external auditory canal and ear lobe; Second cleft—tonsillar fossa; Third cleft—thymus; Fourth cleft—lateral lobes of the thyroid. First arch—lateral portion of the upper lip, upper jaw, lower lip and lower jaw, and body of the tongue; Second arch—body of the hyoid bone, stylohyoid ligament and muscle, anterior portion of the base of the tongue, arcus palato-phyaryngeus; Fourth, Fifth and Sixth arches—development of the soft parts in the region of the greater cornu of the hyoid bone."

"The lower border of the hyoid forms the lower border of all the remains of the branchial apparatus, and nothing below this line has any genetic connection with the branchial apparatus."

Since it is a fact that the muscles descend with the arches and the origin of the muscles can be identified by their nerve supply, it is of the utmost importance that we know the nerves which supply the original arches.

According to Thompson the nerve of the first arch is the third division of the fifth; of the second arch the facial and auditory or seventh and eighth nerves. The third arch is supplied by the glossopharyngeal or ninth nerve. The fourth arch is supplied by the superior laryngeal branch of the vagus, and the fifth and sixth arches are supplied by the inferior branches of the vagus.

The location of the congenital cyst is of importance if one would properly classify its origin. According to all authorities cysts above the hyoid bone may come from the branchial apparatus. Meyer specifically states that everything below this level must come from other sources "even though they may have originated from this apparatus."

The question may properly be asked why should one devote so much time to this type of case which is infrequently seen. I think I need cite only a few case records which I have had submitted to me to show the relative frequency that an incorrect diagnosis is made. Before doing this, however, I believe that it would be better to mention the characteristics of these lesions.

Cysts which have their origin in the branchial apparatus are usually noted at birth, or soon after birth, in the upper lateral aspects of the neck. They are fluctuant or have a tense cystic feel. The skin is not adherent to the mass, there is no tenderness, nor are there any of the ordinary signs of inflammation. The mass is transilluminable. By some transillumination is considered a new procedure. Our records indicate that we have resorted to transillumination for twenty years.

These cysts as a rule do not obtain a very great size. If they remain untreated until adult life it is of importance not to over-look tumors of the vascular system such as aneurysm or sinus pericranii. In aneurysm one will naturally find that the lesion is in the axis of the vessel of origin, there will be an expansile pulsation and not a transmitted pulse, and the tumor will not transmit light, but will rather show an opaque shadow.

Sinus pericranii is mentioned because one has but to see a single case to realize that if overlooked prior to operation it will be a sad day both for the surgeon and the patient. This unusual condition is found at times in the mastoid region over the course of the lateral sinus. Like branchial cysts there is no involvement of the skin. The circumscribed lesion has a cystic feel. It varies in size, increasing with efforts at coughing or anything which increases intracranial tension. By transillumination you obtain an opaque shadow. The X-ray is the most valuable aid in the diagnosis of sinus pericranii as one finds an adventitious opening in the skull similar in many respects to a surgical opening.

Branchial cysts are differentiated from thyroglossal cysts by their location. Thyro-glossal cysts are always in the midline. All movements of the tongue alter the position of this type of cyst.

In view of this fact the natural question which arises is—what is the relationship of the origin of these cysts to the tongue?

The tongue originates from the first, second and third branchial arches. The two lateral halves of the tongue arise from the first branchial arch. They

meet in the midline. Between these paired anlages there is a small, long mass. According to Wenglowski and Meyer this is the thyro glossal strand which connects the mid-thyroid lobe with the tongue surface. The strand either totally disappears or rests of it are found within the tongue substance where the anlage of the mid-thyroid lobe is pinched off. The duct remains behind. This is a lingual duct. It is lined with squamous and ciliated epithelium. As the hyoid bone increases and grows downward the thyroglossal tract undergoes complicated changes. The tract is not very elastic and becomes divided into two parts which are fixed to the tract of the hyoid.

These authors deny the existence of the duct, the so-called thyro glossal duct in the strand which passes through the tongue. They maintain that this strand is never lined with epithelium. They believe that the "epithelium lining midline cysts does not arise from a thyro-glossal duct, but from the mouth cavity epithelium which is torn mechanically into the tissues by the thyroid anlage in its rapid growth."

They further maintain that this type of cyst is never found at birth. Whether we view the midline cysts as having their origin from a thyro glossal duct or strand or from invagination of torn epithelium from the mouth cavity it is a definitely accepted fact that if we want to cure cysts it is necessary to know the direction of the tract and to remove all evidence of it up to the hyoid and through it at times to the base of the tongue at the foramen cecum as suggested by Sistrunk.

In this connection it must not be overlooked that the root of the tongue develops from the medial end of the second and third branchial arches.

If one who doubts the distant origin of these cysts removes one without following it to its ultimate origin someone at a later date will have an opportunity to operate on the patient much to the discomfort of the patient and the disadvantage of the surgeon. These midline cysts are lined with epithelium and they are most commonly found from the second to the fourth decade.

The difficulties which are presented in the handling of these cases are well illustrated by the frequency with which multiple operations have to be done on patients before the ultimate cure is obtained.

After reviewing a large number of records from several hospitals and from personal communications I have been impressed that the diagnosis is often made on insufficient clinical data—if the written record may be accepted as safe criteria. It is also noticable that many times a pre-operative diagnosis of "tumor of the neck," tubercular adenitis and similar statements are written on the operative record, and later in the history the pathologist's report indicates that a branchial cyst had been present. On the oth-

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er hand where the surgeon has noted that a well encapsulated easily enucleable mass of recent origin has been removed I have seen the report indicate a congenital origin to the cyst. This is difficult to believe.

It must not be overlooked that cases which have had a correct diagnosis and presumably a careful dissection by a competent surgeon are not always cured by a single operation.

* * *

RANULA

Another type of cyst of congenital origin is the so-called ranula which according to Thompson has its origin from the cervical sinus. Thompson states "It is difficult to determine the part played by the cervical sinus. It is more than possible that it is responsible for the cysts and fistulae met with in the lower part of the neck below the level of the thyroid cartilage."

Thompson concludes "After careful deliberation I advance the theory that ranula, submaxillary cysts and deep cervical cysts are derived from vestigial remains of the branchial clefts—that the primary cyst is derived from the cervical sinus and that the cyst is carried from its original position by the shifting of muscles during the formation of the neck."

This view has been accepted by Blair and recognized American authors.

Anyone who has had an opportunity to follow the ramification of one of these complicated cysts on the operating table cannot help but accept this theory instead of the simple salivary duct block idea so commonly mentioned in textbooks.

In connection with ranula or any other cyst or tumor of the mouth caution must be exercised to avoid respiratory distress during or after anesthesia.

Sodium amytal has proven to be a dangerous drug in such cases. In one instance asphyxia resulted from the tongue dropping back.

An intratracheal tube introduced prior to operation will in some instances be a life saving procedure.

HYGROMA COLLI

Hygroma colli are found early in childhood as a swelling just above the clavicle and at times following the tissue planes into the axilla. These cysts are derived from the lymphatic or jugular sinus. They attain at times a very large size and require extensive resection for removal. The pectoral muscle must be severed if the dissection is to be complete.

* * *

ACQUIRED CONDITIONS

If the mass in the neck does not have the characteristics of these so far mentioned we must turn to acquired conditions—infections, tumors, and blood dyscrasias and Hodgkin's disease. (Note again Hodgkin's disease is mentioned separately).

The infections are either acute or chronic and the type of masses which I shall refer to under this heading shall be limited to those involving the lym-

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phatic system secondarily.

By way of digression I cannot help reminding you of the relationship of the lymphatics to the blood vascular system from the standpoint of origin. The lymphatic system begins in the neck in the two jugular sacs on either side near the junction of the internal jugular and the subclavian vein. Later in life the lymphatics empty into the venous system again.

We must not be surprised, therefore, when circulatory infections or true septicemia follows so quickly on the heels of a virulent focus of infection on the body surface.

In order to treat effectively acute infections of the lymphatic system one must keep constantly in mind that the removal of the focus will prevent further drainage into the lymphatic channels—hence it is essential to have some idea of the normal drainage route. A brief review of the anatomy of the head and neck may not be amiss.

The preauricular nodes drain the external auditory meatus, the temporal region and the lateral portion of the eyelid.

The parotid nodes drain the surface of the ear, the auditory meatus, the temporal region, the eyelid and the nose.

The submaxillary and facial nodes drain the nose, cheek, upper lid, lateral aspects of the lower lip, the gums, teeth and the anterior third of the lateral portions of the tongue.

The submental nodes drain the skin of the chin, the central part of the lower lip, the floor of the mouth and the tip of the tongue.

The deep cervical nodes along the jugular chain at the upper limit of the digastric triangle drains the base of the tongue.

The superior deep cervical chain also drains the tonsil and the pharynx.

It will be seen, therefore, that the location of a lymphatic involvement should lead to an investigation of a particular region as a focus from which the infection has come.

Acute infections causing lymphadenitis are characterized by constitutional reactions, by a short rapidly progressive course, by changes in the skin (signs of inflammation), fixation of the mass to the skin, fluctuation and tenderness. This type of case presents as a rule little difficulty in diagnosis.

The treatment is simple—incision and drainage in conjunction with attention to the primary focus of disease.

The chronic infections such as tuberculosis and syphilis present many difficulties. Enlarged glands associated with fever, emaciation and sinus formation are ordinarily considered to be of tubercular origin, and in the past it was a common practice to operate without further ado. Many of these operations were mutilating and unnecessary.

It is commonly thought that fusion of the glands produced by a periadenitis is evidence of tuberculosis. This I believe to be wholly incorrect. Periadenitis is an indication of a secondary infection and is often present in hyperplasia of lymph glands due to syphilis and Hodgkin's disease, as well as tuberculosis.

It is, therefore, essential that these conditions should be eliminated before a diagnosis of tuberculosis can be accepted. The size of the gland does not eliminate syphilis. An erroneous idea has been perpetuated that the lymph gland enlargements due to syphilis do not obtain a large size. Many cases which present masses in the neck extending from the tip of the mastoid almost the entire length of the sterno-mastoid muscle have proven to be of syphilitic origin. Moreover, I have seen many cases in which the glandular enlargement was associated with fever and sinus formation which have responded to nothing except anti-syphilitic treatment.

I hold it is a fact that peri-adenitis, sinus formation and large glandular masses is not sufficient evidence on which to make a diagnosis of tuberculosis. Proven tubercular cervical adenitis is not as common as the number of mutilating operations on the neck in the past would indicate. Lymph gland enlargement due to syphilis are found in any of the triangles of the neck. We have noted them frequently under the sterno-mastoid and above the omohyoid. These masses are usually painless. While frequently no peri-adenitis is present the finding of peri-adenitis does not eliminate syphilis.

The degeneration of a mass in the neck with sinus formation should not cause one to overlook syphilis as a factor. Many such cases present no neighborhood lesions such as chancre of the tongue, tonsil, or mucous patch or gumma of the buccal cavity.

If then confusion may be so great it is essential that the clinical laboratory be used in every way possible to aid in the diagnosis. Wasserman reactions, blood pictures, and even biopsy.

One of the most gratifying things is to see the promptness which masses due to syphilis begin to melt away under proper medication.

At this time one cannot help but mention the fact that actinomycosis never produces lymph gland involvement unless there has been a secondary infection either from breaking down of the original lesion or surgical intervention.

HODGKIN'S DISEASE

Early manifestations of no disease are so inadequately described in text books as Hodgkin's disease. One sees in text books only the description of the late stages and even that late picture is not true if certain observations which we have made are correct. We are all familiar with the description of the huge masses in both sides of the neck, the axilla and the groin. Hodgkin's disease may go on to its termination and still the glands remain small, discrete, hard and painless.

There are certain clinical phenomena which should be more generally considered in connection with Hodgkin's disease—the febrile reaction, the skin lesions, the character of the glandular enlargement, the blood picture, and that group of cases which during life defy recognition because of the absence of superficial lymph node involvement. (Retroperitoneal type).

The febrile reaction is of the utmost importance. It simulates the typhoid temperature. This temperature may persist for weeks, reaching 104-105 at times. **In treating these cases with radium or X-radiation one must disregard the temperature.**

The skin lesions are interesting. There is at times a diffuse petechial type of lesion which produces an intense pruritis.

The blood picture is not characteristic, yet at times there is a marked leucocytosis, polynuclear in character. Without a differential count one might be inclined to venture a diagnosis of lymphatic leukemia because of the great leucocytosis.

It cannot be repeated too often that the lymphatic enlargement need not be great. The glands at times are so small that without a histological examination one would not be justified in making a diagnosis of Hodgkin's disease. Paradoxical as it may seem the histological picture is not so definite that even the most expert pathologists will agree that a particular section is or is not Hodgkin's. I have had such instances where Lanford, Ewing, Stewart and Clarence Cohn have differed as to the nature of the same specimen. (See report case of Chylothorax, American Journal of Surgery, February 1931, Isidore Cohn).

It would seem, therefore, that even though one has exhausted all means at our command a positive diagnosis of Hodgkin's cannot always be made.

I will not go into the question of whether Hodgkin's is an infection, a tumor, or a blood dyscrasia as that would take too long and there is such a diversity of opinion among the observors who have had the greatest amount of experience. Of one thing we can be certain—cases of Hodgkin's disease respond at times in a spectacular way to massive doses of radium or X-radiation. In this connection we ought to insist that radiation should not be done over anything except the areas of involvement. Prophylactic radiation over gland bearing areas not involved is not advocated by any of the authorities at present.

Dr. Coley advocates the use of Coley's toxins in conjunction with radium. My own experience with this combination has been extremely satisfactory.

I cannot refrain from making one last remark—the absence of superficial lymph node involvement does not eliminate Hodgkin's as a possible diagnosis in obscure abdominal conditions. (See paper Retroperitoneal Tumors—Isidore Cohn).

TUMORS

BENIGN TUMORS may arise from any of the tissue groups or special organs in the neck. Some of the growths mentioned in the group are benign in one sense and malignant in another.

I propose to briefly discuss lipomas, sebaceous cysts, vascular tumors, (aneurysm) carotid body tumors and encapsulated epithelial nerve tumors as examples of each have been observed by me.

LIPOMAS

LIPOMAS may attain any size. They are painless. The skin is not taut and there are no color changes. There is some movement of the tumor under the skin though this is limited due to the connective tissue trabeculae into which the fat is deposited. Making the skin taut over the tumor mass causes a dimpling of the skin. Lipomas do not transilluminate as a rule. It might be well to emphasize transillumination as a method of differentiating solid tumors from cysts.

There is only one treatment for this type of tumor—complete excision.

SEBACEOUS CYSTS

SEBACEOUS CYSTS are painless, circumscribed, dome shaped, smooth masses with a small crater at the summit. The crater may be hardly visible to the naked eye, but it is present as it represents the blocked orifice of the sebaceous gland. The mass moves with the skin as it is an integral part of the skin. When the skin is made taut over the mass an ivory whiteness of the underlying material can be seen through the skin. These lesions present few difficulties in diagnosis.

When uninfected excision of the gland with the overlying summit is the treatment of choice.

When secondary infection occurs incision and destruction of the secreting membrane followed by packing is the only thing possible.

VASCULAR TUMORS

Several types of VASCULAR TUMORS occur in the neck, but the only ones which need brief consideration at this time are aneurysms. Aneurysm of the subclavian, innominate, carotid and facial arteries are not uncommonly seen. It is necessary to remember that the tumor is found in the region of a particular vessel, there is an expansile pulsation, and this pulsation can be stilled by properly applied pressure.

In this series there is an interesting aneurysm of the facial artery which presented itself for differential diagnosis.

I would feel, if I said more with reference to aneurysm, that I was trespassing upon a field which had been covered by the master vascular surgeon, Professor Matas. Yet if I did not mention these lesions in connection with masses in the neck, I would not be a worthy pupil of our distinguished friend.

CAROTID BODY TUMORS

The next to be discussed is the so-called CAROTID BODY TUMOR.

About 80% of these tumors are benign. The origin of the carotid body is doubtful. The discussion still goes on as to whether it is epithelial in origin or primarily neurogenic. EVEN IF NEUROGENIC IT COULD STILL BE OF EPITHELIAL ORIGIN.

Whatever its origin it is well to know that the so-called carotid body has an abundant nerve supply. It received branches from the vagus, glossopharyngeal, and the superior cervical sympathetic. According to Callison and McKenty fibers from the above nerves "form a flexus just in front of the carotid body."

This is of more than passing interest in view of the fact it not infrequently happens that a respiratory paralysis follows operations on tumors of this body.

This interesting "organ" is found at the bifurcation of the carotid. Tumors developing from it grow slowly, are painless, have a lateral mobility, but do not move in the long axis. This I believe to be due to the fixation of the lesion in the carotid bifurcation. There is a transmitted pulsation, but not an expansile pulsation. These lesions do not invade surrounding structures, thus differentiating them from secondary metastatic carcinomata. They do not produce a general deterioration of the patient's health. As a rule these patients present themselves for operation because of the size and extent of the growth which lifts up the sternomastoid and may reach up as high as the angle of the jaw, and down in the neck for a considerable distance. In some instances hoarseness, cough, aphonia, dysphagia and occasionally exophthalmos are noted.

When one considers the nerve supply these subjective and objective phenomena are not to be wondered at.

Operation is the only treatment. In approaching such a mass one must be prepared to ligate the carotid artery as well as the jugular veins. For the above reason the patient had best be under observation long enough pre-operatively to test the collateral cerebral circulation. It should not be necessary to do more than mention the superiority of the Matas-aluminum band over the ligature when the carotid is to be occluded. I believe that the jugular vein should be ligated along with the carotid as Makins has pointed out. He maintains that the collateral circulation is more likely to be efficiently maintained and that failure to ligate the vein permits of a too ready exit for the diminished arterial supply. Believing this to be logical I have ligated the jugular in one of my cases.

There are times when the tumor can be dissected away from the vessels without ligation.

The pre-operative diagnosis of carotid body tumor is not always correct as was proven in two of my cases one of which turned out to be an encapsulated epithelial tumor of the spinal accessory nerve, and the other a metastatic mass from a primary carcinoma of the tongue. These experiences will be briefly mentioned to emphasize the difficulties of diagnosis in masses. One of these cases has been reported in detail in a previous paper. (Epithelial Neoplasm of Peripheral and Cranial Nerves)

Briefly- the patient, age 53 years, presented a discrete, smooth, non-pulsating mass in the right side of the neck. The upper limit corresponded to the tip of the mastoid and the lower pole reached the thyroid cartilage. The mass had lateral mobility, but none in the long axis of the body. It was not adherent to the underlying skin. I thought certain that I was dealing with a carotid body tumor. At operation I found an elliptical tumor which was continuous with a **cord** at its upper and lower poles. The **cord** at the lower pole followed the course of the spinal accessory nerve. The tumor was lateral to the great vessels of the neck.

Post-operatively the patient developed definite atrophic changes in the distribution of the spinal accessory nerve (atrophy of trapezius, supra and infra-spinatus).

This case is mentioned to prove that even solitary nerve tumors must be considered when trying to make a diagnosis of an obscure neck mass.

MALIGNANT TUMORS OF THE NECK

Primary malignancy of the neck of an epithelial nature is rare. Lympho-sarcoma, lymphoblastoma, and Round cell sarcoma are the most frequent of primary growths in the neck.

Metastatic growths involving the lymphatics are not uncommon. If careful search for the original lesion is made one will usually be rewarded, and the patient will have a better chance for prolongation of life. The original lesion may be at a great distance from the metastatic growth in the neck, for instance

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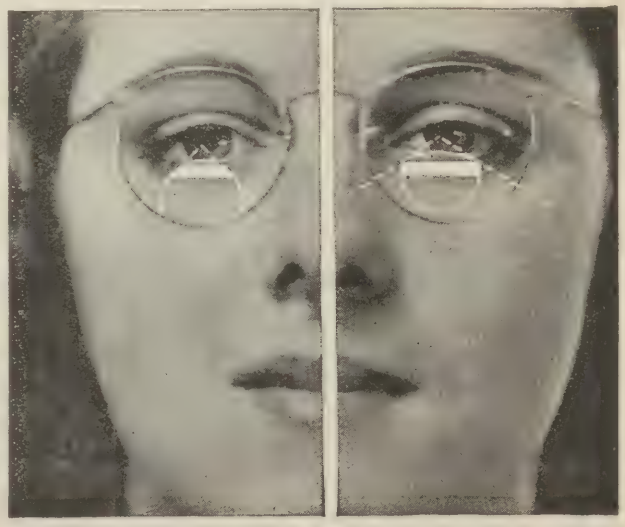

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the sentinel, or Ewald's gland, in the left supraclavicular region may suggest that the original growth is in the gastro intestinal tract anywhere from the rectum to and including the stomach. It should not be forgotten that if the ordinary lymph channels are blocked metastases may be found in glands not ordinarily drained by the area involved, as for example carcinoma of one breast with metastasis to the glands in the opposite supraclavicular region; carcinoma of one side of the tongue with metastasis to the opposite side of the neck.

The primary lesion may be so small that even a specialist of long standing may overlook the growth at his initial examination. This is well illustrated in the folowing experience.

Mr. J. F., age 65 years. Weight 240 pounds, but had lost 30 pounds during the past year as a result, so he stated, of dieting. Six months prior to my first examination he noticed a mass in his neck. This mass produced neither pain, hoarseness, aphonia, dysphagia nor discomfort of any kind. An experienced oto-laryngologist found nothing in his larynx, pharynx and his trachea. I could see nothing in his mouth or his lips.

Examination of his neck revealed a mass on the right side just below his ear. The mass was firm, not tender, well encapsulated, movable on the deep tissues and not attached to the skin. **It was easily movable laterally, but not up and down.**

Believing the mass to be a CAROTID BODY TUMOR, as there was no invasion of the surrounding tissue and also because of the characteristics and location of the growth, and further because of the negative findings of the oto-laryngologist, I operated with a diagnosis of carotid body tumor. At operation I was able to dissect the mass from the vessels, but on the posterior aspect at the lower pole of the growth I saw the spinal accessory nerve emerging from an opening in the capsule of the mass. Neurolysis was done.

There were no other palpably enlarged masses in the anterior cervical triangle.

Dr. Lanford reported that the mass was a poorly differentiated squamous cell carcinoma. Upon receipt of this report I asked the oto-laryngologist to review the case. This time he found a small ulcer at the base of the tongue. Here then was the factor of importance, a primary carcinoma of the base of the tongue.

There are several instructive lessons in this experience, and these lessons can be multiplied by other similar experiences.

1. Metastatic lesions are not always invasive—certainly not until they have broken through their capsule.

2. The metastatic lesion may remain movable for a long period, and there need not be extensive chains of glands involved.

3. Small primary carcinomas may be present and metastasize before they are detectable.

From personal experience I could multiply the number of cases of metastatic lesions where the glands were not fixed to the skin when first seen, and even after a rather prolonged period. The glands in carcinoma are hard, painless, and as a rule not mov-

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able on overlying structures even though there is no fixation of the skin.

The following is a brief clinical report of cases of carcinoma of the tongue with metastases to cervical lymph nodes.

Case 1. Mr. M. K., age 52 years. Carcinoma of tongue. Right side of the tongue is hard, almost a stoney hardness. The left side is soft. Marked loss of symmetry of the tongue. No visible ulceration of the tongue. In the right digastric triangle there is a hard, nodular mass which is not adherent to the skin. The mass is not movable on the underlying tissue.

Case 2. Mr. W. J., age 50 years. Carcinoma of tongue. The tongue is large, broad, contains a definite tumefaction in the left posterior half and some involvement of the right half of the tongue posteriorly. There is a deviation of the tongue, the tip pointing to the left. There is ulceration of the soft palate on the left as well as the tonsillar fossae. No fulness in the floor of the mouth. There is fulness in both sides of the neck. The skin is not glossy. There are large, discrete, hard glands in both sides of the neck. There is absolutely no fixation of the glands to the skin.

The patient remained under observation for four months during which time the glands did not become fixed to the skin.

Case 3. Mr. H. R., age 51 years. Carcinoma of tongue. The tongue is ulcerated, particularly on the right side. It is fixed to the floor of the mouth. The glands in the submental, disgastric and cervical triangles are palpably enlarged. They are hard, discrete, and not fixed to the skin.

Radon implantations—ten 3 millicuries radon implants were buried in the tongue. The external carotid was ligated.

Ten days after the operation the tongue was much smaller, the ulcer on the surface was reduced to 1-4 its original size. The patient by this time was able to talk more easily and to swallow without difficulty. The improvement was spectacular.

The treatment is mentioned in connection with this case because when first seen the patient presented, from the standpoint of surgery, a perfectly hopeless risk for any radical procedure.

Treatment of carcinoma of tongue and lip is still a moot question. Authoritative expressions relative to this statement must bear a **date** as experience with radiation in sufficient doses has recently changed the attitude of many. With the increasing knowledge of the value of radon, and the ease of procuring it in measured doses, the use of this form of radiation has increased. At the Memorial Hospital in New York Dougles Quick and his associates are using Radon in the management of "the routine epithelioma of the lip."

With the increasing realization of the futility of extensive mutilating operations on patients in whom the metastatic lesions have invaded the surrounding tissues the use of radiation either as X-radiation, radon implants, or radium packs, has largely supplanted surgery.

On the other hand there are surgeons of great experience who prefer extensive surgery. If surgery is to be of service it must be extensive.

The subject which I have chosen to discuss could be prolonged indefinitely. One object, I hope, has been realized—to point out the need for careful differential diagnosis in order that many real problems will not be overlooked and much trouble, both for the surgeon and the patient, may be avoided.

SUMMARY

(1) Masses in the neck should be classified as to their origin into congenital and acquired; anatomically with reference to the tissue involved (lymphatic, vascular, nerve, etc.) and etiologically (infections, tumors, and blood dyscrasias).

(2) The diagnosis and treatment of congenital neck masses requires an intimate knowledge of embryology and anatomy.

(3) Lymphatic involvement usually follows definite drainage areas.

(4) Lymphatic involvement due to an acute process is associated with constitutional reactions—changes in the skin and an early suppuration.

(5) Chronic infection of lymphatic structures due to tuberculosis and syphilis may form large conglomerate masses, sinus formation. The periadenitis found is due to secondary infection.

(6) The text book picture of Hodgkin's disease is misleading in that the late manifestations are usually described.

The glands vary in size, at times remaining discrete, in other instances they become matted together.

These glands are hard, painless, and do not break down.

An acute febrile reaction simulating typhoid fever is often an associated manifestation of the disease.

Radiation therapy, preferably radium, is a means of palliating the disease. I believe eventually all of these patients succumb to the disease.

There are cases of Hodgkin's in which none of the superficial lymphatics are palpably enlarged. The retroperitoneal groups alone are involved in this type.

(7) Benign Tumors, Carotid Body Tumors, Aneuysms, Primary and Metastatic new growths and their treatment are briefly discussed.

Medical students should not be taught into helplessness by too much equipment and too much to do with while they are taking their course.

DR. J. M. ACKER, JR.

J. M. Acker, Jr., Aberdeen, Miss., the active, courtly, and popular president of the Mississippi State Medical Association. The subject of his address at the coming session will be "The Community Hospital."

Criteria for Estimating the Value of Antisyphilitic Compounds and the Amount of Treatment to Administer*

BY JOHN A. KOLMER, M.D.

THE NECESSITY FOR CRITERIA FOR EVALUATING ANTISYPHILITIC COMPOUNDS AND THE AMOUNTS TO ADMINISTER IN THE TREATMENT OF SYPHILIS

A very large number of arsenical, bismuth and mercury compounds produced for the treatment of syphilis has resulted in considerable confusion as to their relative values.

It would appear futile to attempt any scheme for standardization of treatment until this matter is first placed upon a sound and scientific basis.

For this purpose well defined criteria for evaluating antisyphilitic compounds are required.

A great deal of inadequate treatment is being administered in all good faith. This is not a matter of surprise in view of the number of different plans which exist even for the treatment of acute early syphilis while in the treatment of chronic syphilis the situation is almost chaotic.

Criteria as clearly defined as possible for evaluating the amount of treatment to be given may be helpful.

THE VALUE OF ANIMAL TOXICITY TESTS

Toxicity tests employing the lower animals are of primary importance in evaluating compounds for the treatment of syphilis.

The results are expressed in terms of the largest single or multiple tolerated dosage per kilogram of weight.

Of equal importance is a determination of effects upon the internal organs and especially the liver and kidneys by histological examinations.

The value of toxicity tests is limited by differences in physiological function and this in turn is influenced by species, age, weight, etc., and the fact that healthy animals may tolerate more than syphilitic human beings, but a compound should never be administered in the treatment of syphilis and especially by intravenous injection, until such tests are completed.

Low toxicity is always desirable but is not the sole criterion, as this may be associated with low therapeutic activity and render the compound relatively or absolutely worthless. Low toxicity with high parasiticidal activity is most desirable.

The degree of local irritation by intramuscular injection may be determined in the lower animals as likewise certain pharmacological effects as rate of absorption, fate and elimination as well as effects upon important centers, etc.

THE VALUE OF RABBIT SPIROCHETICIDAL TESTS

Tests for the spirocheticidal activity of compounds are so readily conducted with syphilitic rabbits that there is never the slightest excuse for accepting any for the treatment of human syphilis until such tests are conducted and at least some degree of curative activity definitely demonstrated.

The results should be expressed in terms of the smallest amount per kilogram of weight required not only for the dissipation of local lesions but for complete sterilization of the lymphatic glands.

While the tests require too much time and work for the routine testing of all lots of arsphenamin, neoarsphenamin, bismuth, etc., yet occasional batches should be tested and at least all new compounds thoroughly studied before acceptance.

If this were insisted upon or legally required a number of compounds now in use and creating a false sense of security in the treatment of syphilis would doubtless be withdrawn.

Rabbit syphilis is more readily cured than human syphilis but the tests are of distinct value for comparing different compounds and yield results bearing a ratio to human syphilis.

Some compounds are low in spirocheticidal activity but possess other desirable properties like low toxicity and high penetrability for the central nervous system, but a second criterion should be insistence upon a reasonable degree of curative activity for rabbit syphilis.

THE VALUE OF TRYPANOCIDAL TESTS

There appears to be some relationship between the trypanocidal and spirocheticidal properties of the organic arsenicals and especially the trivalent compounds.

Trypanocidal tests are quickly and cheaply conducted and the results are sharply defined.

Trypanocidal tests of arsphenamin and neoarsphenamin are officially required in some European countries.

Neoarsphenamin may vary greatly in trypanocidal

*Read before 49th session of Mid-South Post Graduate Medical Assembly, February, 1933.

and spirocheticidal properties.

Therefore it is strongly recommended that some type of trypanocidal test be applied to neoarsphenamin as a measure of its curative activity before being employed in the treatment of syphilis.

The employment of neoarsphenamin below the average in parasiticidal activity may give a false sense of security and result in the under-treatment of syphilis.

Arsphenamin and silver arsphenamin are much more constant in trypanocidal and spirocheticidal properties.

CHEMOTHERAPEUTIC INDICES

A comparison of toxicity and therapeutic activity determined in the lower animals:

Maximum tolerated dose per kilo

Minimum curative dose per kilo

index

Best determined by employing normal rabbits for toxicity tests and syphilitic rabbits for curative tests.

The index is a useful means for comparing remedial agents. The figures given in table are not taken as a final indication of the spirocheticidal effect of various antisyphilitic remedies. No doubt the test is valuable for a comparatve appraisal of the therapeutic efficiencies, and yet clinical experience shows that one cannot rely on the treatment of patients by the use of bismuth only, that arsenicals are of basic value, and that a combination of arsenical and bismuth is perhaps the better plan.

It expresses a ration of curative power in human syphilis and especially in acute early syphilis.

It does not however, take into account other important factors like penetrability of the tissues of the central nervous system. For example neoarsphenamin and sulpharsphenamin have a higher index than arsphenamin for the rabbit than for man, but arsphenamin is higher for man.

THE WASSERMANN REACTION FOR ESTIMATING CURATIVE ACTIVITY

The amount of complement fixing antibody in the blood and cerebrospinal fluid is an index of the degree of infection.

By a modification in technic to avoid non-specific reactions, the Wassermann reaction is applicable to syphilitic rabbits for estimating the curative activity of remedial agents.

In rabbit syphilis there is a definite relationship between spirochetic activity and the degree of complement fixation and the symptoms in human syphilis, because symptoms are dependent upon the location of infection whereas the amount of antibody is dependent upon the degree of spirochetic activity.

A quantitative Wassermann reaction of superior sensitiveness and specificity is an additional criterion of value for estimating curative activity in both human and rabbit syphilis.

THE THERAPEUTIC TEST FOR ESTIMATING CURATIVE ACTIVITY

The final criterion. Empiricism will always have a place in further developments in syphilotherapy and is alone responsible for the discovery of mercury and the iodids as well as more recently of malarial and other types of fever therapy.

Has the advantage of showing some special properties not readily detected by animal tests.

Tryparsamide with a low index of 2 to 3 is of definite value, however, in neurosyphilis. Neoarsphenamin with an index of 16 is inferior in curative activity to arsphenamin with an index of 10. Mercury with an index of only 1 still has a place in treatment although probably more in deference to habit and tradition and being rapidly displaced by bismuth. Iodids with practically no index at all are yet indispensable in chronic syphilis.

But the ease of dissipation of external lesions by various agents may lead to error as in the case of sodium cacodylate.

In general only remedial agents demonstrating some degree of curative activity in rabbit syphilis with sufficiently low toxicity should be subjected to clinical trial.

HISTOLOGICAL CRITERIA FOR AMOUNT OF TREATMENT

At the present time there is practically no agreement as to the kinds of drugs to be given, the amounts to administer, the time over which treatment should be given or whether the compounds should be given simultaneously or alternately.

It is no wonder, therefore, that the treatment of syphilis is apt to be inadequate.

Theoretically the amount of treatment required is that sufficient for the complete sterilization of the patient.

But this can be determined only by painstaking microscopical examination of the tissues after death and therefore many years will be required for the final standardization and evaluation of treatment.

Dark-field and histological examination of the lymph glands from treated cases of syphilis are too irregular and inconstant for criteria.

CLINICAL RELAPSES IN RELATION TO THE TREATMENT

Adequate treatment requires the complete eradication of obvious lesions and symptoms or the cessation of further clinical and radiological evidences of progression.

In acute early spyhilis there must not be subsequently any evidences of relapse in the central nervous, cardiovascular or other organs.

Neuro-relapse is most frequently and easily detected but endosyphilis and especially of the cardiovascular system may escape clinical detection or be but accidentally detected by the Wassermann test, until irreparable damage has been done.

THE WASSERMANN REACTION IN RELATION TO TREATMENT

The Wassermann reaction should be brought to a permanent state of negativity by a method embracing the maximum of sensitiveness consistent with specificity.

Wassermann reactions are indicated at least once or twice a year for the balance of life until more reliable criteria of cure established.

The Wassermann reaction is extremely valuable for the detection of relapse when this is not possible by clinical and radiological examinations.

In Wassermann-fast cases infection is present and periodic courses of treatment required for the balance of life.

Every case of syphilis requires one or more examinations of the spinal fluid.

No case can be regarded as cured with positive spinal fluid changes.

When positive findings disappear under treatment it is advisable to re-examine the fluid every year or two for a long period of time in order to detect possible neuro-relapse as soon as possible.

CONCURRENT VERSUS ALTERNATE TREATMENT

Concurrent treatment refers to the simultaneous administration of the organic arsenicals along with bismuth or mercury.

Alternate treatment refers to courses of the arsenicals followed by courses of bismuth or mercury.

Advocate of the concurrent method claim that they have a smaller percentage of relapses.

Advocates of the alternate method claim that they have fewer relapses and that the concurrent plan gives a higher percentage of dermatitis, neuritis, jaundice, Wassermann fastness and greater chances for the infection establishing itself in inaccessible tissues during the rest periods required for the recuperation of the patient.

Without doubt every effective drug should be brought to bear upon the infection and best results are secured by the continuous method of treatment of acute early syphilis by the alternate plan.

In chronic syphilis however, the method should be adopted to the individual cases. The author prefers an alternate plan embracing the injection of an arsenical followed by one of bismuth or mercury and so on for a course along with the oral administration of an iodid.

IS SYPHILIS CURABLE?

Probably "not" unaided by medicinal treatment as immunological resistance alone is unable to effect a recovery.

Doubtless "yes" in the majority of acute early cases treated by the continuous plan over an adequate period of time.

Doubtless "no" when treatment is instituted in the chronic stages of acquired syphilis and in prenatal syphilis insofar as complete eradication of the infection is concerned.

But "yes" is many cases of chronic acquired syphilis and prenatal (congenital) syphilis in so far as clinical cure is concerned embracing a sufficient eradication of the infection to prevent further progress of the infection over the usual span of life.

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DR. JOHN W. D. DICKS

Dr. John W. D. Dicks was born on January 19, 1874 in Jefferson County, Mississippi. He was reared in the City of Natchez, attending school in Natchez and at Jefferson Military Academy near Natchez. After completing his high school course he entered Leland Stanford Jr. University in California, matriculating in the science course with the view of preparing for the study of medicine. In 1895 he matriculated at Tulane University Medical Department, graduating therefrom in the class of 1899.

Shortly after graduation he began the practice of medicine in Natchez, Mississippi. In 1907 he was elected Surgeon-in-Charge of the Natchez Charity Hospital, a state charity hospital. He remained in charge of this institution until June 1916. In 1914 he was elected a Fellow of the American College of Surgeons.

In June 1916, he was called for active duty in the Medical Department of the Mississippi National Guards in federal service on the Mexican Border. He served as Major of the Medical Corps and Surgeon of the 155th Infantry from June 1916 to September 1917. At this time the United States being at war with Germany, he was transferred to the 39th Division, U. S. Army, as Assistant Division Surgeon, serving in that capacity until March 1918, when he was promoted to Lieutenant Colonel, Medical Corps, U. S. Army, and assigned to command the 114th Sanitary Train, Medical Regiment of the 39th Division. This organization he accompanied to France during the summer of 1918. Shortly after reaching France he was detailed temporarily to organize and command Camp Hospital No. 70, a fifteen hundred bed hospital at St. Florent, France. After completion of this tour of duty he returned to his command, which had in the meantime become the 7th Corps Sanitary Train attached to the 7th Corps, a part of the 3rd Army, A. E. F., on duty in Germany. He received an official citation for services rendered during the World War. Returning from army service in the spring of 1919 he resumed practice in Natchez.

He is a Fellow of the Ameican College of Sur-

geons, a Fellow of the American Medical Association, a member of the Mississippi State Medical association, a member of the Southern Medical Association, a member of the Homochitto Valley Medical Society, a member of the Southeastern Surgical Congress, and a member of the American Association of Railway Surgeons. He is a member of the Presbyterian Church. He is also consulting Surgeon for the Yazoo & Mississippi Valley Railroad, Local Surgeon for the Mississippi Central Railroad, Acting Assistant Surgeon of the U. S. Public Health Service, Field Examiner of the U. S. Veterans' Administration, and President of the Staff of the Natchez Sanatorium. He is a Knights Templar of the Masonic Order, a member of the Benevolent and Protective Order of the Elks, a Woodman of the World, and a member of Sigma Alpha Epsilon Fraternity.

Report of Committee On Community Hospital Legislation

TO THE MISSISSIPPI STATE
MEDICAL ASSOCIATION:
Gentlemen:

Your Committee on Community Hospital Legislation, appointed two years ago and reappointed one year ago to function as a legislative committee for Community Hospitals throughout Mississippi, herewith submits the following report:

Since the meeting of this Association last year we have been active in legislative matters for the Community Hospitals and have done all we could to inform the Legislators and the people as well, in reference to the necessity of a more equitable distribution of funds appropriated for the care of charity in our state.

Many years ago before the establishment of Community Hospitals in Mississippi, in fact, hardly before any hospitals were established in the state, it was necessary for our state government to own and operate State Charity Hospitals for the care of the indigent sick in the State of Mississippi. At that time we judge there were very few capable surgeons and hospital people available to operate these institutions and apparently the only way for the unfortunate poor to secure hospitalization was for the state to operate its own institutions. Immense sums of money have been appropriated to these hospitals during the past half century and there is no doubt in our minds that this money has been well spent and has done a great deal of good.

In years gone by in the neighborhood of $300,000.00 annually has been appropriated for the care of the poor of Mississippi needing hospital attention in a general hospital, a great per cent of which has gone to the state-owned hospitals. Investigation will show that in the neighborhood of three-fourths of this money has been spent on people from either the county or adjoining counties to these institutions. A large proportion of the population has received very little benefit from these sums and are receiving less each year, owing to the fact that they can go to their home institutions and almost pay hospital expenses with a sum equal to that of traveling and other incidental expenses of going to and from the state-owned hospitals.

The progress of medicine, however, during the last decade has caused the building of more than fifty hospitals by individuals, corporations, municipalities, and counties throughout the state, a great majority of them being excellently equipped with every modern convenience, far more so than the state institutions have ever been, and are being operated by personnels of well trained hospital people, having on their staffs outstanding medical and surgical men free from any political interference. This has, in our opinion, changed the hospital situation in Mississippi in regard to the care of the state's charity patients. We believe the services of the state-owned institutions should rapidly come to an end or be operated as Community Hospitals only, and such monies as have heretofore been appropriated to these institutions for the needy should go to all the approved hospitals in Mississippi. We would like to call the attention of this body to the fact that at the present time THERE ARE ONLY EIGHT STATE-OWNED HOSPITALS IN THE UNITED STATES AND MISSISSIPPI HAS FIVE OF THEM.

We would like also to call your attention to the fact that we are informed that the capacity of all the state-owned hospitals combined is less than 700 beds, and probably less than one-half of these have been used during the last two years, presumably because of lack of funds. On the other hand, according to our survey, there are between 1000 and 1200 empty beds available for charity in the other hospitals of Mississippi, one of these institutions being located in almost every community and convenient to all the people.

The plan which we recommended to the Legislature was that the appropriations for the care of charity patients in Mississippi be made on a per capita basis, allotting to each county a certain sum of money, in proportion to the population of said county, to be used to care for hospital expenses of the needy of that particular country.

Assuming that we are going to spend $300,000.00 per year in Mississippi for the care of charity. This is equivalent to 15c per capita, which would give the county of Hinds with 85,000 people approximately $13,000.00 per year for the care of the charity patients in that county, and would give the county of Desoto of 26,000, in the extreme end of the state, approximately $4,000.00 for the care of its charity.

All hospitals of Mississippi when approved by a board of Hospital Inspectors can qualify to take charity patients but must take said patients on an actual cost basis, and no doctors' fees are charged. This actual cost is to be ascertained by a survey of all the hospitals in the state, or adjoining states, or the entire country, if desired. The charity patients of the various counties in Mississippi could then go to the hospital of their choice or the one recommended to them by their family physician. As a rule, of course, they would go to the institution nearest them. The family physician and two citizens of the county in which the patient resides shall recommend all charity patients as objects of charity. Their certificate is legal evidence that the case is one of charity, and the bill of actual cost is charged against the allotment of

the county in which the patient resides.

We contend that this plan will save many lives among the poor people of Mississippi by rendering it possible for them to secure hospitalization near their homes. We further contend that it will save the patients and their people enormous sums of money they have heretofore had to spend in carrying their indigent poor a long way from home to the state charity institutions.

We have no fight at all with the state-owned hospitals. They have done a great work, but we do believe that it is time for them to become Community Hospitals and operate under the same plan as outlined above, which allows not only the hospitals remote from cities where state-owned hospitals exist to care for the charity on an actual cost basis but also all the hospitals in the cities where state-owned hospitals are to do likewise. In other words, all hospitals meeting the approval of a board of Hospital Inspectors have a right to care for charity patients in Mississippi, recommended to them by the patient's family physician as charity, on an actual cost basis.

Now, a Bill incorporating the above plan was submitted to the 1932 session of our Legislature. Our committee made several trips to Jackson in behalf of this Bill. We were invited to appear before both the Finance and Appropriation Committees, where we made an earnest endeavor to secure favorable reports. Lieutenant Governor Murphree, who wrote the first Bill for an appropriation to Community Hospitals twelve years ago and who has since continuously advocated and fostered plans of this kind, accompanied our group before the Finance Committee and made a speech advocating state aid for Community Hospitals. The Finance Committee gave us a very fine hearing and as much time as we desired, and they had a full attendance. At the time we were invited to appear before the Appropriation Committee there seemed to be other business of importance, and the chairman of this committee, as well as some other members, were not present, and only a limited time was allowed us. However, a fairly good number were present and were apparently deeply interested in our program.

The Legislature was in session a long time and our Bill was apparently pigeon-holed in the Appropriation Committee and failed to make its appearance. A day or two before the session adjourned a substitute Bill was rushed through the Senate by friends of Community Hospitals in that body, but it incorporated only a part of our plan, and gave to some thirty-five hospitals a very small amount each to be used partially as we have suggested. The State Hospitals were left to function as heretofore but appropriations were greatly reduced. The thirty-five institutions named in our Bill received altogether $39,000.00, a little more than that appropriated to one state-owned institution. While the amount was exceedingly small, the committee greatly appreciates getting this for Community Hospitals in Mississippi, and we find, upon investigation, that even this small amount has done a great deal of good in the care of the unfortunate poor in sections of Mississippi where no state-owned institution exists.

We are candidly of the opinion that a great majority of the membership of both the House and Senate are in favor of our plan. And may we say here that we deeply appreciate the strong efforts of the friends of Community Hospitals in the Legislature and their earnest endeavors in behalf of our program, and we sincerely hope that the membership of the State Medical Association will impress upon all members of the Legislature in their respective communities the importance and necessity of an equitable distribution of the appropriation for charity and insist that they make such an appropriation on a per capita basis so that every county in the state shall share in said appropriation in keeping with its population, which will render it possible for the unfortunate poor, needing hospital attention, to go to their home institutions, be near home people, and be saved enormous expenses, as well as, in many instances, life itself.

As stated above, our Bill giving aid to the Community Hospitals requires the institutions to accept patients on an actual cost basis. This actual cost basis was arrived at by using the latest survey of the American Hospital Association of nearly all the hospitals in the United States, setting forth the cost per day per patient in the various states; also by letters received from a member of the largest hospital in our adjoining states as well as a great number of hospitals in Mississippi. This information being presented to the Board of Trustees of the various institutions and the fee adopted in keeping with the actual cost based on all this information, and no medical or surgical fees charged at all.

Now, the American College of Surgeons, American Medical Association, American Hospital Association and other organizations are continuously making surveys of the cost of hospitalization in this country, and are annually publishing the actual cost per day per patient in all the states and the United States as a whole. The surveys are impartial and unbiased and are made only for the purpose of ascertaining the cost of hospitalization and with the hope of reducing same as much as possible. We find that the Community Hospitals are entirely willing to adopt a fee for the care of charity in Mississippi in keeping with the actual cost per day per patient ascertained by these various organizations. They are even willing and ready to accept a survey of a joint commission appointed by this organization and state authorities to make a survey of the hospitals of the entire nation, if they so desire, in reference to the cost of hospitalization, and will accept what they find to be the actual cost per day per patient of the entire nation as a fee basis for the care of all charity patients in Mississippi.

After the Community Hospitals began using the little funds appropriated to them last year in accordance with the bill making said appropriation, and the Boards of Trustees of the various institutions appointed by the governor, who, according to the attorney General, had full authority concerning the use of said funds, had determined what was actual cost by the methods above mentioned and the actual cost fees were adopted, it was necessary for your committee, accompanied by the officials of the State Medical and State Hospital Associations, to make several trips to Jackson to counteract propaganda put out by just a few people, possibly only one or two, to the effect that the Community Hospitals in Mississippi were

charging excessive fees for their services to charity patients.

These parties or party, whom we were assured by high state officials represented nobody in authority, apparently spent more time, on a pretense of economy, trying to humiliate the Community Hospitals of Mississippi, all of them having an exceedingly hard time to exist, in the expenditure of the little sum handed out to them, than was spent on the $20,000,000.00 otherwise expended by the State of Mississippi for everything.

We would not mention this propaganda if it were not for the fact that off and on all during last year letters containing statements very embarrassing to honest people were mailed out from these parties or party concerning the expenditure of the little fund each of the institutions received; and only recently letters were mailed to all members of the Legislature trying to create an impression that state-owned hospitals can be run so much more economically for charity patients than the actual cost fee basis of other institutions. Just why so much interest in an apparent endeavor to embarrass and humiliate the Community Hospitals, and apparently so much more favorable interest in state-owned institutions, we are unable to understand.

These same people seem absolutely unable to consider the enormous sums of money tied up in state-owned institutions, the interest on this money, the depreciation on buildings and that every few years additional appropriations are being made for large sums of money for new equipment, building repairs, etc., which are not counted in their regular running expenses; that these institutions pay no taxes; that they receive a great number of patients with minor ailments and medical cases that are inexpensive, while ninety to ninety-five per cent of the patients that go to the Community Hospitals go there for major operations which require operating room fees, anaesthetic and laboratory fees, possibly X-ray services, etc., and a longer stay in the hospital.

These same propagandists seem unable to recognize the fact that the expense of long trips for people having to go to state-owned institutions has to be paid by the community in which the patient lives. They seem further to be absolutely unable to recognize the fact that the services in Community Hospitals, which are being run both for pay and charity patients and where all classes get the same treatment, are naturally supposed to be and are of a higher type.

The committee, therefore, appeals to the membership of this organization to inform your Legislators of the true facts that actually exist concerning the apparent difference in cost of state-owned institutions and those operated by other folks. You can truly say to them that it is unreasonable to assume that people appointed to serve state institutions, regardless of their past experience (some without any), become such wizards in economy and efficiency that they can operate state charity hospitals so much more economically than folks who operate all the other hospitals in the United States, and who have given a greater portion of their lives to this work and have had years of experience entirely free from political influences.

In conclusion, gentlemen, we wish to express our deep appreciation for the whole hearted co-operation of the president of the Association, Dr. J. M. Acker, who has met with us on every occasion during the year and who has been whole heartedly behind our program in every detail.

We are also deeply indebted to Dr. J. Gould Gardner, president of the State Hospital Association, Dr. J. C. Culley, ex-president of this Association and chairman of the Committee on Hospital Legislation from the State Hospital Association, and Dr. W. W. Crawford, chairman of the Committee on Hospital Legislation up until May, 1932, who have likewise met with our committee several times and have rendered it very valuable service.

In addition to these officials, we have had a number of very prominent members of our Association, as well as Mr. Hamilton Crawford and Miss Mary Dorsey, R. N., members of the Board of Hospital Inspectors, present and doing all in their power to assist us in our program.

And again may we say that we deeply appreciae the encouragement and assistance of the many friends to the Community Hospitals among our law making body.

Respectfully submitted:

E. R. NOBLES, M.D., Rosedale
District, Three, Chairman
V. B. PHILPOT, M.D., Houston
Secretary and Representative
District Four
R. B. CALDWELL, M.D., Baldwyn
District One
C. M. SPECK, M.D., New Albany
District Two
M. L. FLYNT, M.D., Meridian
District Five
J. P. CULPEPPER, M.D., Hattiesburg
District Six
J. W. D. DICKS, M.D., Natchez
District Seven
R. W. SMITH, M.D., Canton
District Eight
W. H. ANDERSON, M.D., Booneville
State-at-Large

THOMAS D. MOORE, M.D., F.A.C.S.
Memphis Eye, Ear, Nose and Throat Hospital Bldg.
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Urology and Urologic Surgery

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DR. J. GOULD GARDNER

J. Gould Gardner is president of the Mississippi State Hospital Association. He has been one of the most active presidents the association has had. He is getting under the load. He does not walk around any problem. He walks straight up in its face. He has the intestinal fortitude, the will and the ability to do the job. You will see the result of his constructive work. Read his statement.

To the Readers of the Mississippi Doctor

Dear Friends:

Just as "Necessity is the mother of invention," just so has been the development of the hospitals. More and more as the science of medicine and human civilization advances, the more necessary hospitals become to provide the facilities, equipment and trained workers so necessary to the advancing technique of progressive medicine.

It has been truthfully said, "Through all the ages the care of the sick has been the index by which may be judged the progress of human civilization." It is very apparent to even casual observers, that a majority of the indigent cases in Mississippi are not provided with hospital care to which they are entitled in this era of our civilization. This is mostly due to the fact that our State Charity Hospital System is wrong and the State appropriation of .07½ cents per capita, is ill-advised economy. Our plans to change these wrongs to a "New Deal" for the charity patients of Mississippi will be published in The Mississippi Doctor in the near future. I hope you will read it and pass it on to your friends and I solicit from you and your friends your fullest co-operation for the worthy unfortunate patients throughout our commonwealth.

Sicerely,

J. GOULD GARDNER, M.D.,

President Mississippi State Hospital Association.

Public Health News Items

A study of dental practices with special application to public health programs will be undertaken shortly in the North and Middle West by Dr. William R. Wright, Jackson, member of the State Board of Health.

Dr. Wright had been appointed for the survey by the Commonwealth Fund of New York and will make his trip of observation as the guest of the philantropic agency. The fund is co-operating in Mississippi's public health program.

Dr. Wright, who has been a factor in moulding the dental hygiene program of the Mississippi health department, considered second to none in the country, will study work and methods in children's dentistry and public health programs on an itinerary that will include:

Several clinics in New York City and Boston, the Forsyth Training School, the Rochester Dental Dispensary, public clinics of Cleveland and Chicago and the Harvard and Tufts Dental Schools. Dr. Wright will contact leaders in the profession in other centers, exchanging information and outlining to them Mississippi's work in this field.

Dr. Wright, who is serving his second six-year term on the board, of which he is the dental member, has served as president of the Mississippi State Dental Association, Mississippi councillor for the American Dental Association, and a member of the board for the national organization.

Dr. E. R. Coffey of the United States Public Health service was a visitor to the Mississippi State Board of Health recently. While here, he, accompanied by Dr. Ricks, made observation trips to the health departments in Warren and Holmes Counties.

A recent report from the Division of Mouth Hygiene of the State Board of Health, gives the information that of the 54,989 mouths examined during the last seven months, forty-one per cent were okeh. This means that the school children of Mississippi are getting the excellent habit of keeping their mouths clean and free of dental defects. This is a remarkable showing. Only six years ago, the percentage of okeh mouths found on examination in the same number of mouths was only twenty-eight.

During the last two weeks of March an immunization program in Madison County resulted in the giving of 1994 doses of typhoid vaccine and 430 doses of toxoid.

During the past fifteen years, thirty deaths in human beings due to hydrophobia have been recorded in Mississippi. Fourteen quarantines are now on in Mississippi, most of them being for entire counties. The State Hygienic Laboratory sent out 1312 rabies treatments during last year, and during the first three months of this year, nearly five hundred treatments have been sent out by the State Laboratory. If laws requiring vaccination of dogs were enforced, life, suffering, worry, and expense would be

saved.

Dr. John A. Ferrell of the Health Division of the Rockefeller Foundation was a visitor to the Mississippi State Board of Health several days during March. Dr. Ferrell was in Mississippi for the purpose of looking over the program to the support of which the Rockefeller Foundation is contributing. From Jackson, Dr. Ferrell went to Dallas, Texas to attend the meeting of the Pan American Medical Association. From there he went to Mexico City, Cuba, Florida, and back to Washington by plane.

Scholarships for the study of medicine at Tulane Medical School, available under the Commonwealth Fund's plan of co-operation with the Mississippi State Board of Health and Tulane University, have been awarded.

Those who received awards are: Martin Luther Flynt, son of Dr. M. L. Flynt, now of Meridian; Robert Peyton Vincent, son of Mrs. Bertha Jane Vincent, Jackson; Charles Roderick Jenkins, son of Mr. D. R. Jenkins, Hattiesburg.

Thomas Lambert, son of Mrs. Carrie C. Lambert, Charleston; Howard Alexander Nelson, son of Mrs. W. H. Nelson, Tunica.

The scholarships provide $100 a month for the students through their medical education and carry the proviso that they will return to Mississippi for their first three years' practice, serving in communities of not over five thousand population.

When the five students selected begin the 1933-34 term at Tulane this fall, Mississippi will have fifteen scholarship students at Tulane.

An interesting feature of the selections was that three of the students honored are the sons of widows.

DR. T. M. DYE

Here is a likness of Dr. T. M. Dye of Clarksdale. He has been secretary of the Mississippi State Medical Association for sixteen years. He knows his "doctors." He knows his constitution, his rules and regulations. He is a Ph.D. in the technique of "secretaryship". He is a diplomat that might be classed along with Henry Clay. He helps every one to be president, to be a good one. He is a native of the good old county of Desoto. He appeared on the scene September 5, 1874. He attended Millsaps College. He received his M.D. from Tulane in 1900. He was married to Miss Mary Johnson of Harriston, Miss. June 12, 1901. He is the faithful and proud father of six fine sons, one of which is now a prominent member of the state legislature. You have heard, "The die is cast," but this Dye is still casting for the good of organized medicine.

General News

JACKSON, Miss., April 6.—Five Mississippi students have been selected for four-year Commonwealth Fund scholarships at Tulane University Medical School, according to Dr. Felix J. Underwood, state health officer.

Those awarded were:

Robert Peyton Vincent, Jr., Jackson, son of Mrs. Bertha Jane Vincent.

Martin Luther Flynt, Jr., Newton, son of Dr. M. L. Flynt.

Charles Roderick Jenkins, Hattiesburg, son of D. R. Jenkins.

Thomas Harrison Lambert, Charleston, son of Mrs. Carrie C. Lambert.

Howard Alexander Nelson, Tunica, son of Mrs. W. J. Nelson.

The scholarships provide $100 a month for the students through their medical training and carry the provision that they return to Mississippi for their first three years' practice, serving in communities whose populatons do not exceed 5,000.

Vincent and Flynt are now at Tulane, Jenkins is at the University of Alabama, Lambert is teaching school at Tunica and Nelson is at Ole Miss.

The above young men are most fortunate in receiving the scholarships from the Commonwealth Fund, and to be privileged to attend a medical school like Tulane. Dr. Felix J. Underwood rendered a wonderful service when he secured these scholarships for the state of Mississippi. Booneville now has two representatives—Paul Googe in the graduate school and Dr. L. L. McDougal in the Post-Graduate. Both of them are making good their opportunity.

Dear Doctor:

We are pleased to announce the appearance of the third issue of the HAROFEH HOIBRI (Hebrew Physician), the only Hebrew Medical Journal published outside of Palestine. This issue, which is edited by Dr. Moses Einhorn, consists of 168 pages, and is larger and more elaborate than the previous editions.

You will not from the contents that besides numerous articles on general medical subjects, there are three additional divisions; a special section on health in Palestine by Dr. H. Yassky, medical director of the Hadassah hospitals; a section on Talmud and medicine, and an interesting section devoted to Hebrew medical terminology, which will be of great service to the future medical department of the Hebrew Uni-

versity.

The charge is $1.25 per copy, and is obtainable at the RAB INOWITZ BOOK STORE, 48 Canal Street, New York City.

Sincerely yours,
THE HEBREW PHYSICIAN
By L. B. SCHWARTZ, M.D., Treas.
RAPHAEL SHOCHETT, Sec'y

DR. FELIX J. UNDERWOOD

Dr. Felix J. Underwood, a native of Lee County, went to the University of Tennessee, where he was awarded his medical degree in 1908. For the next four years he practiced medicine in Monroe county, where he also served as part-time health officer. Continuing his practice, he became a member of the Council of the Mississippi State Medical Assiciation in 1912 and served until 1919, in the interim becoming chairman of this body. During the same period and holding the post until 1925, he was secretary to the Northeast Mississippi Thirteen-County Medical Society. From 1912 to 1916 he served as Monroe county chairman for the American Red Cross afterward being elected chairman of the Democratic Executive Committee for that county from 1916 to 1920. During these latter three years he was Director of Monroe County Health Department. In 1919 he was made director of the Bureau of Child Hygiene, Mississippi State Board of Health, which office he held until July 1924. The same year he was elected to the Presidency of State Medical Association. In rapid succession he became a member of the Governor's staff (1920-1923), Councilor for Mississippi to Southern Medical Association (1921-1927), State Health Officer of Mississippi (1924——), Secretary of Board of Trustees, Mississippi State Tuberculosis Sanatorium, (1924——). He was admitted as a Fellow of American College of Physicians May, 1927. In 1927 and 1928 he served as secretary for the National Malaria Committee; in 1928 became member of State Commission for the Blind, member of Board of Trustees of Mississippi Children's Home Society, member of Gulf and South Atlantic Mosquito Congress, member of Harrison County Mosquito Control Commission, all of which he retains to date.

1930-31 Dr. Underwood was elected President of the Southern Medical Association. At the close of his term he was made a member of Board of Trustees of this association. The same year he was a member of the Committee on Prenatal and Maternal Care of the National White House Conference on Child Health and Protection, General Chairman of the Mississippi Council for Child Health and Protection (Mississippi White House Conference), staff member of Baptist Hospital, Jackson, chairman of Committee on Public Policy and Legislation of State Medical Association, of which committee has been member for ten years.

For several years Dr. Underwood has been a member of the Executive Committee of the Mississippi Tuberculosis Association, a member of Board of Directors and Consulting Medical Director of Standard Life Insurance Company. Last year he was elected to membership of the Governing Council of Southern Branch of America Public Health Association, and made Mississippi referee for American Public Health Association, N. Y. this year. Dr. Underwood is a Presbyterian, a Rotarian, a Shriner. He is being prominently mentioned as our next Surgeon General. Should he be selected he would distinguish the United States in this field as he has Mississippi in public health.

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Infantile Paralysis

BY E. LAURENCE SCOTT
Birmingham, Ala.

Groups of medical men consisting principally of those engaged in general practice, are difficult to interest in the highly specialized phases of medicine and surgery, and so I have chosen to generalize the subject of my discussion of Infantile Paralysis, with an apology to those of you who may be particularly interested and more familiar with this subject, and with the wish to those not so concerned that you will find something of interest to you in this question.

Infantile paralysis, more specifically known as Anterior Poliomyelitis, is an ancient disease. Biblical and secular history recounts famous men who were sufferers from this malady. Practically every country and civilization has at one time or another passed through an epidemic of this disease, and had left among its people an army of cripples. It is endemic as well as epidemic. It is seasonal in epidemic form but may occur in any month of the year and at any age in life. One has but to mention the name of Franklin D. Roosevelt to impress the importance of the condition. Of course, as the name infantile paralysis implies, it is to be expected in the early years of life. There seems to be no racial predilection for the disease and there is no respect of personages, as it affects the rich equally as often and severely as the poor. No safe guard can be thrown around a child to prevent the attack, and association seems not to play an important part in transmission. The mention of transmission brings up an interesting point. Our definite knowledge is that the disease is due to a filtrable virus, which can be isolated in the secretions from the naso-pharanyx of the victims in the acute stage. Extensive experimentation as to the actual transmissibility of infantile paralysis has been scientifically carried on, but has ended in large part in the failure to disclose any transmission peculiarities. However, from the present knowledge we have, the inference can readily be drawn that it is directly contagious and demands quarantine.

Confusion may exist as to just what constitutes infantile paralysis, with reference to classification of the forms of paralysis common in early life. To simplify one's conception it could be put about this way; infantile paralysis is a motor paralysis affecting the motion centers in the spinal cord. Extensions into the higher levels of the cord, as in the high cervical types, may be found, and the brain itself become affected, but this is not the rule. In cases of the latter type frank evidence of motion center involvement would be apparent. Suffice it, therefore, to say that it is a motor paralysis affecting voluntary muscle principally. It is not essentially a sensory paralysis, though sensory disturbances and pain and soreness may co-exist. Flaccidity or loss of muscle tone is a cardinal symptom. With this as a ground work then, the types of paralysis so often confused with infantile paralysis would probably be the following:

First: Spastic paralysis or paraplegia. To quickly bring it to point, in spastic paralysis or Little's disease, increased muscle tone produces spasticities and inco-ordinated rigid like motions. Increased reflexes and exaggerated muscles tone are always noted in this paralysis. The usual history is that it was noted at birth or very soon thereafter.

Second: The cerebral hemorrhage group. Paraplegias and monoplegias. Here again definite group rigidities and increased reflexes. Often clear clinical history of trauma, as in a fall from a chair, with the consequent head symptoms. Motion is exaggerated if attempted.

As to the so called birth palsies, obstetrical paralysis, such as the type Erb describes in the upper arm, and the foot types seen in the relaxed tendon of Achilles, allowing the foot to be unduly dorsi-flexed on the tibia, are as a rule identified with mal-positions in utero or are connected with difficult and unusual labors.

If the above descriptions aid in the classification of paralysis, then the question of the specific diagnosis of infantile paralysis can not be made until the paralysis appears.

Let me warn you against any thoughts you may have about the so called "preparalytic stage" of infantile paralysis. This is indulging in conjecture and might lead to serious error and only add to the confusion of diagnosis. This stage is suspected only, and you as medical men like to avoid the term "suspicion" in your practice and deal with more probable facts. Leave this sort of action to the old Mississippi conjure doctor, where it rightly belongs.

General malaise, vomiting, temperature and headache are prodromal symptoms. One or more of these symptoms may be present from one to three days, or even be so slight as to be overlooked. Often times measles and influenza cloud the picture, and the diagnosis of infantile paralysis is not made until the paralysis appears, in an entire extremity or a partial paralysis in a particular muscle group. To withhold a diagnosis until sure of the disease is reasonable and not open to censure. On the apperance of the paralysis there is usually associated muscle soreness which may continue from one to four weeks.

Since no estimate of the extent of the paralysis can be made on its initial appearance, it is well to keep in mind that all voluntary muscle tissue is subject to the disease and a careful check should be made to complete the survey. Not infrequently the abdominal and back muscles are overlooked in this survey. If so, grave impairment of their function may come about and resistant spinal curvatures result.

What then can the general practitioner do for the child during the acute and sub-acute stage to minimize the residual paralysis and prevent deformities? It is better to do nothing than to aggravate the affected muscles by active and passive motion. Massaging, kneading and rubbing is contra-indicated during the sore muscle stage. Rest, in recumbency, in the normal positions for the trunk and limbs is the keynote of early treatment. No uncomfortable or un-natural positions should be allowed. Physiologic rest is demanded to prevent muscle stretching and joint strain. This rest may be aided by simple but efficient supports, for example, sand bags on each lateral aspect of the thigh or leg to control inward and outward rotation or at sole of the foot to prevent foot drop. Plaster of Paris bandages offer us a ready

form for temporary splint construction. Continue the normal spinal curves by pillows, etc., if the paralysis affects the trunk. These measures should be continued for three weeks or more, if necessary, until all muscle soreness has disappeared, then the final "check up" will probably reveal the actual amount of paralysis to be dealth with. Later more specific measures directed to the re-establishment of muscle control and stimulation can be used, ranging from muscle training, massaging, to brace wearing and even to planned surgical operations when indicated. The surgery of infantile paralysis should be reserved until all else has been used in the treatment and a proper prognosis determined. It is safe to say that two years should elapse before deciding on any particular surgical procedure.

The efficacy of medication, except to meet unusual conditions during the acute stage, is questioned. Also, for the present at least, our knowledge of the effects of administration of convalescent serum to these patients is not complete, and therefore might be passed over.

If it will be remembered that a muscle affected by infantile paralysis can be compared to a rubber band that has been partially burned and lost its tone, then the resulting effect of the steady pull of an unaffected opposing muscle can be readily understood, and the problem of preventing the deformities following infantile paralysis becomes less formidable, and happier end results may be expected.

Tentative Program State Medical Association, May 9-11, 1933

Section on Medicine, A. H. Little, Chairman, Oxford.

Symposium on Heart Diseases

Heart Disease, L. W. Brock, McComb.

The Etiology of Heart Disease, J. H. Musser, New Orleans.

The Prognosis in Coronary Disease, L. J. Clark, Vicksburg.

Urinary Antiseptics, F. L. Van Alstine, Jackson.

The Question of Prognosis, W. A. Dearman, Gulfport.

Asphyxia Neonatorum, F. G. Riley, Meridian.

Neuronitis Complicating Pregnancy, G. Y. Gillespie, Jr., Greenwood.

Climacteric Hypertension, W. L. Stallworth, Columbus.

Radiology, J. A. Beals, Chairman, Greenville.

The Early Diagnosis of Pulmonary Tuberculosis, L. J. Menville, New Orleans.

Dermatophytosis of Extremities, Its Treatment by X-ray Therapy, H. G. McCormick, Laurel.

A Paper, J. Rice Williams, Houston.

Section on Surgery, V. B. Philpot, Chairman, Houston.

Newer Methods in the Treatment of Prostatic Obstructions, Russell A. Hennessy, Memphis.

Intestinal Obstruction, A. G. Payne, Greenville.

The Treatment of Chronic Ostoemyelitis with Live Maggots, R. J. Field, Centreville.

Chronic Peptic Ulcer, W. H. Sutherland, Booneville.

Some of the Surgical Aspects of Obstetrics, M. L. Flynt, Meridian.

Spinal Anesthesia, H. A. Whittington, Natchez.

Cervical Obstructions, W. F. Hand, Jackson.

Carcinoma of the Colon, M. Q. Ewing, Amory.

Section on Eye, Ear, Nose and Throat, C. C. Buchanan, Chairman, Hattiesburg.

A Few Clinical Observations on Allergy from the Otolaryngological, Viewpoint, Edley H. Jones, Vicksburg.

Evaluation of the Symptoms of Chronic Aural Suppuration, J. R. Hume, New Orleans.

Acute Sinusitis, Diagnosis and Treatment, L. S. Gaudet, Natchez.

Nasal Obstruction, Causes, Diagnosis and Treatment, Geo. E. Adkins, Jackson.

Spontaneous Epixtasis, D. C. Montgomery, Greenville.

Tuberculous Iritis, B. S. Guyton, Oxford.

Conjunctivitis; Acute, Diagnosis and Treatment, E. LeRoy Wilkins, Clarksdale.

Cataract, Senile and Traumatic, M. L. Batson, Jackson.

Section on Public Health:

Contagious Aspects of Heart Disease, G. C. Terrell, Prentiss.

A Comparative Study of the Different Treatments of Hookworm Disease in Children, H. F. Garrison, Jackson.

The Use of the Laboratory, A Discussion of the Factors which Determine the Value of Laboratory Work, T. W. Kemmerer, Jackson.

Convalescent Serum in the Prophylaxis and Treatment of Measles, H. F. Garrison, Jr., Jackson.

Some Observations on Movable Kidney, Temple Ainsworth, Jackson.

Standards for Surgical Pathologists in New York State

BY THOMAS PARRAN, JR., M.D.,
Commissioner of Health, State of New York

Some seventeen years ago a system was inaugurated in New York State of issuing certificates of approval to those laboratories that conform to the minimum standards established by the Public Health Council. During the period that has ensued, the quality of the bacteriological and serological work has greatly improved, standards have been gradually advanced, and the development of laboratory service throughout the state has been stimulated to a remarkable degree.*

The increase in the number of examinations now

*The Sanitary Code applies to New York State exclusive of the City of New York so that only a few laboratories in that city—those wishing to examine specimens for patients living ouside of the city limits—have made applcation for approval by the State Commissioner of Health.

made annually, as compared with those made in 1915, may not be of major significance in this connection, since other factors have also entered into the phenomenal growth. The effect of the system of approval is clearly evident, however, in the fact that in 1915 more than 32 per cent of the examinations were made in the Central Laboratory of the State Department of Health while in 1931 only approximately 13 percent were made there. Thus, although the work of the state diagnostic laboratories in Albany has steadily increased in this as well as in other respects, there has been very marked decentralization, as indicated by the proportionately much larger amount that is done in the local laboratories, and this may also be taken as an index of the improvement in the laboratory service rendered to the physician at the bedside.

Hitherto, certificates of approval have covered only bacteriological and serological examinations but their scope is now to be broadened. The New York State Health Commission, which Governor Roosevelt appointed in 1930 to study the administrative and legislative aspects of public health in needs of the people were being met, stated in its report, presented December 31, 1931, that the "commission has been impressed by numerous reports of the lack of qualifications on the part of pathologists who make tissue diagnoses of cancer. This is a serious matter, since an error of the pathologist is likely to result either in a needless operation or in the failure to operate when the patient is in need of it. The State Department of Health and the Public Health Council have done much to extend and to improve the quality of bacteriological service in public health laboratories throughout the State through a system of approval issued to such institutions. The system of approval should be extended to include pathological laboratories and pathologists."

In 1932 Section 4-b, Article II, of the Public Health Law, which permits the State Commissioner of Health to issue to laboratories certificates of approval covering such examinations as the Sanitary Code may require to be made in approved laboratories was amended. It now provides that, in addition to the director or bacteriologist, the pathologist in charge of such examinations shall possess such educational and technical qualifications as the Public Health Council shall establish. Also, Regulation 7 was added to Chapter IV of the Sanitary Code, to become effective January 1, 1933. It specifies that:

> Representative specimens, or sections for microscopic examination, of tissue removed at operation or at necropsy which require laboratory examination as an aid in the diagnosis, prevention, or treatment of disease or to determine the cause of death shall be submitted to an approved laboratory, to the Division of Laboratories and Research, Albany or New York City, or to the State Institute for the Study of Malignant Disease, Buffalo.

The Public Health Council has established the following requirements for persons in charge of laboratories which receive approval (other than those which restrict their services to the sanitary examination of milk and water samples only):

Preliminary qualifications. All directors of laboratories, surgical pathologists and bacteriologists in charge of laboratories shall possess the integrity and ability to conduct a laboratory in which satisfactory standards of work can be maintained; directors of laboratories and surgical pathologists shall be graduates of medicine of schools recognized by the regents of the University of the State of NewYork and licensed to practice medicine or eligible for examination for license to practice medicine in the State of New York; and bacteriologists in charge of laboratories shall possess the educational requirements for a doctorate degree in science, public health or medicine as prescribed by a university holding membership in the Association of American Universities.

Director. The qualifications shall include an adequate knowledge of pathology and bacteriology subsequent to graduation, at least four years' training and experience in pathological and bacteriological work approved by the Public Health Council.

Surgical pathologist. The qualifications shall include an adequate knowledge of pathology and, subsequent to graduation, at lease four years' training and experience in pathological work, approved by the Public Health Council, of which at least one year shall have been devoted to training and experience in the diagnosis of neoplastic disease.

Bacteriologist in charge. The qualifications shall include, subsequent to graduation, at least four years' experience or training in pathology and bacteriology or in bacteriology alone, approved by the Public Health Council.

Only under special conditions may any or all of the qualifications relating to education or experience be waived by the Public Health Council.

In carrying out the provisions of these regulations, approval of a laboratory is considered by the Division of Laboratories and Research and is issued only to those applicants who, having met the educational requirements prescribed by the Public Health Council, are able to demonstrate their ability to perform the duties of the position satisfactorily and who agree to conduct the work of the laboratory in an ethical manner and to maintain the technical standards required for approved laboratories under the authority of the Commissioner of Health.

The directors, bacteriologists-in-charge, and surgical pathologists are expected to devote the major part of their time and attention to the work of the laboratory. A cerificate of approval is issued to an applicant who has not been engaged in active laboratory work for a number of years only after his qualifications have been reviewed in the light of the advances in bacteriology and pathology that have taken place in the interim.

The certificate specifies the particular laboratory examination for which approval is granted. It is valid until the 31st day of December of the year in which issued unless sooner revoked and may be renewed upon application. It terminates automatically, however, with changes in the personnel in charge of work for which approval has been issued; new appointees

must qualify in the usual manner.

Applicants for approval in surgical pathology demonstrate their efficiency in this field by examining sections of tissue from a series of representative lesions. Much care has been expended in the selection of the material for this purpose. The tissues have been contributed by a number of eminent pathologists in the state. Only those sections are used upon which the pathologists of the Division of Laboratories and Research and the State Institute for the Study of Malignant Disease are in complete agreement as regards the character of the lesion and its suitability for the purpose—the material being submitted to each independently without reference to the others' findings. Applicants may examine a series of these sections, together with pertinent data from the histories which accompany the specimens, in the Central Laboratory in Albany, the Branch Laboratory in New York, or at the State Institute for the Study of Malignant Disease, Buffalo. The establishment of other centers may later be found to be desirable. A certificate is issued only after conference and agreement that the applicant meets minimum standards of efficiency. Incidentally, a collection of tissue sections is being accumulated which will be available for persons interested who may wish to study them. This service should prove very helpful to pathologists in laboratories where only a limited amount of surgical material is examined.

Even before the regulation became effective, on January 1, 1933, a number of applicants had already qualified and marked interest in the plans for the development of this field of laboratory service is being shown.

The Present Status of Vaccine and Non-Specific Protein Therapy*

BY JOHN A. KOLMER, M.D.,
Professor of Pathology and Bacteriology in the Graduate School of Medicine of the University of Pennsylvania; Professor of Immunology and Chemotherapy in Temple University
Philadelphia, Pa.

Vaccines have proven of definite value in the prevention of certain diseases, but their value in treatment has been frequently questioned.

The psychologic attitude of the physician and patient has some bearing upon the results of therapeutic immunization; however, there must be something of real merit in vaccine therapy to have had it survive all the abuses committed in its name during the past twenty-five years.

The effects of vaccines are both specific and non-specific. Specific effects refer to the production of antobodies and are almost alone responsible for the prophylactic value of active immunization. Microorganisms vary greatly in their vaccinogenic activity.

Non-specific effects refer to the production of fever, leukocytosis, an increase of the non-specific bactericidal substances of the blood and the promotion of phagocytosis, and probably play some part in therapeutic immunization.

*Read before 49th session of Mid-South Post Graduate Medical Assembly, February, 1933.

PREPARATION OF VACCINES

Methods of preparing vaccines are of considerable importance. In general terms, vaccines of living bacteria of reduced virulence are most vaccinogenic, but of limited application.

The soluble exogenous toxins and products of pathogenic bacteria are highly vaccinogenic and should always be included whenever possible.

Vaccines sterilized by phenol, tricresol or other chemical agents are more vaccinogenic than heat-killed vaccines.

Vaccines of the soluble toxins of staphylococci and streptococci are especially desirable. These may be prepared by cultivating the organisms in suitable broth media for 5 days. The broth culture should then be passed through a Berkefeld filter and the sterile filtrate employed as a vaccine; or tricresol, to a concentration of 0.5 percent, may be added to the unfiltered culture, followed by incubation at 37 degrees C. for 24 hours, and employed as a vaccine after proper dilution, if found sterile upon subculturing; or chemically killed organisms may be added to a sterile filtrate in the desired concentration.

Accurate bacteriologic examination is requisite in the preparation of autogenous vaccines. No matter how carefully a vaccine is prepared, it cannot be expected to give specific results if the primary organisms of importance are lacking. The very purpose of vaccine treatment may be defeated at the outset by poor or indifferent bacteriologic technic.

As a general rule, autogenous vaccines are to be preferred to stock vaccines in the treatment of disease, because of the occurrence of immunologic specific strains of pneumococci, streptococci, staphylococci, gonococci and possibly other pathogenic bacteria, and because of the freshness of autogenous vaccines and the presence of toxins before deterioration occurs by age and by keeping at room temperature.

ADMINISTRATION OF VACCINES

The route of administration of vaccines has an important bearing upon their prophylactic and curative activities.

The skin is an important organ of antibody production, and **intracutaneous injections** are probably to be preferred to the use of the subcutaneous route.

As antibody production may occur principally in infected tissues, it is likely that the local applications of vaccines, and especially Besredka's "antivirus," may possess therapeutic possibilities.

The local application of vaccines may also bring the bacteriophage into play, but the possibility of local antibody production appears to be the more important mechanism.

For non-specific effects from bacterial protein, the intravenous route is to be preferred.

Not all pathogenic bacteria in the form of vaccines are capable of engendering immunity.

Vaccines have proven of great value in the prevention of smallpox, rabies, diphtheria and typhoid-paratyphoid fevers.

Some success has attended vaccination against scarlet fever, pertussis, cholera, plague, bacillary dysentery, pneumonia, meningitis and the common

cold.

THE COMMON COLD AND ACUTE INFECTIONS

The common cold is a disease of great direct economic importance, and is also important from the standpoint of predisposing to paranasal sinus infections, pneumonia and tuberculosis.

It is probably due primarily to a virus, which may reduce resistance to secondary organisms, like streptococci, pneumococci, staphylococci, M. catarrhalis, B. influenzae and B. friedlander.

Stock and autogenous vaccines possess prophylactic value in about 50 per cent of the cases. Best results have been observed with mixed stock and autogenous vaccines, four to six doses being given at 3 to 5 day intervals.

Vaccines are not necessarily contraindicated in such acute systemic infections as surgical septicemia, pneumonia, typhoid fever, etc. Small doses do not add appreciably to the toxemia.

Small doses, at close intervals, are indicated, however, when vaccines are employed, to avoid overstimulation of the immunizing capacity of the patient.

As antibody production ma yoccur principally in the infected tissues, it is likely that the intracutaneous or subcutaneous injection of small doses may stimulate the antibody?producing capacity of the skin and other tissues.

The intravenous injection of small doses is sometimes advisable, for non-specific effects.

The vaccine treatment of acute localized infections is permissible and advisable.

CHRONIC INFECTIONS

The vaccine treatment of chronic infections has been the usual field of application, on the basis of stimulating antibody production.

Infections of bone are usually refractory and likely to yield unsatisfactory results.

The vaccine treatment of infections of the soft tissues is usually more satisfactory, and especially those due to staphylococci and streptococci, like furunculosis, asthma due to bacterial sensitization, etc.

The vaccine therapy of focal infections is deserving of wider application.

Removal or drainage of primary foci may be without therapeutic effect, if the secondary foci are well established.

Extracted teeth and enucleated tonsils should be carefully cultured and autogenous vaccines administered as part of the recurring iritis, chronic infective arthritis, neuritis, myositis, etc.

NON-SPECIFIS PROTEINS

Non-specific protein therapy is still largely upon an empiric basis. The mechanism is unknown, but the production of fever, along with quantitative and qualitative changes in the leukocytes, with an increase of non-specific bactericidal substances of the blood and of phagocytosis and focal reactions of hyperemia and exudation, are regarded as being of most importance.

Many agents have been employed, especially typhoid and other vaccines, intravenously, and sterilized milk or milk proteins intramuscularly.

Severe constitutional reactions from intravenous injections are dangerous in chronic myocarditis, and especially in syphilis.

Especially good results from non-specific protein therapy have been observed in some cases of chronic recurring iritis, chronic gonococcus infections, infections, infective arthritis, recurring erysipelas, neurosyphilis, etc. It has also been employed with success in the treatment of some acute infections, like, pneumonia, typhoid fever, septicemia, etc.

2101 Pine Street.

Ole Miss Medical News

By Woodard D. Bracham

JAMES REAGAN SIMMS, JR., B.S., M.S., Ph.C., M.D.,
Professor of Bacteriology and Pathology

There is one Alabamian on the faculty of the University of Mississippi School of Medicine, and that one is Dr. Simms. He received the B.S. degree from Emory University in 1923. One year later he completed the requirements for the degree of Master of Science, during which time he was an Assistant in Chemistry. He began his official connections with the University of Mississippi as Assistant Professor of Chemistry in 1924, a position which he held for two years. During the summer of 1925, he attended the University of Alabama. He accepted the Professorship of Bacteriology and Physiology (as Head of the Department) in the School of Pharmacy in 1928, having received the Ph.C. degree that year. In addition to his duties in the Pharmacy School, he taught the course in Clinical Diagnosis in the School of Medicine during the session of 1929-30. He was also director of the department of X-ray and laboratory at the Oxford Hospital during that year.

Having spent the summers of 1926, 1928, and 1930 studying at the University of Michigan, Dr. Simms returned to Emory University from which he received the degree of Doctor of Medicine in 1932. He served a one year Interneship at the Crawford W. Long Hospital, Atlanta, Georgia, and spent considerable time

doing X-ray work in that institution. Dr. Simms again returned to Mississippi in 1932—this time to be Professor of Bacteriology and Pathology in the Ole Miss Medical School.

Among his hobbies we find fishing, athletics, and travel. Those who have been fortunate enough to have received instruction from him in Bacteriology will probably all agree that his pet hobby is his Bacteriology lab. He is a member of the Rotary Club.

CHARLES EDWARD WARD, B.S., M.D.
Professor of Physiology and Clinical Diagnosis

Born in Tupelo, Missisippi, Dr. Ward entered the University of Misissippi as a pre-medical student in 1924. Four years later he received the Bachelor of Science degree and Medical Certificate with distinction, having made a very enviable record in the Ole Miss Medical School as well as in the College of Liberal Arts. He received his M.D. from Tulane University in 1930.

In July of last year he began an Interneship in the U. S. Marine Hospital, Norfolk, Virginia, a position which he occupied until July, 1931. He accepted the Professorship of Physiology at the University of Mississippi in 1931 and has acted in that capacity since then. This session he became Professor of Clinical Diagnosis. Although teaching the classical Physiology of Howell, Dr. Ward impresses upon the minds of the students that knowledge of those things which are theoretical is important and knowledge of things practical is even more important.

He likes all sorts of sports, but perhaps fishing and tennis are his chief hobbies. He is prominently identified with the Oxford Baptst Church, which he serves as a Deacon.

Dr. Ward is a member of Theta Kappa Psi Medical Fraternity.

Announcement

The West Tennessee Medical and Surgical Association will hold a two day session at Shiloh Park May 25 and 26. There will be a basket dinner the first day. The Mississippi Doctors are cordially invited.

The Board of Trustees voted to retain the Ole Miss Medical School. We thank them. We commend them in their wisdom.—Ed.

I'll Be Seeing You In Jackson—

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